

61ST CONGRESS : : 3D SESSION

DECEMBER 5, 1910-MARCH 4, 1911

HOUSE DOCUMENTS

VOL. 118

WASHINGTON : : GOVERNMENT PRINTING OFFICE : : 1911

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ANNUAL REPORT
OF THE BOARD OF REGENTS OF
THE SMITHSONIAN
INSTITUTION

SHOWING THE OPERATIONS, EXPENDITURES
AND CONDITION OF THE INSTITUTION
FOR THE YEAR ENDING JUNE 30

1910

REPORT OF THE
U. S. NATIONAL MUSEUM



WASHINGTON
GOVERNMENT PRINTING OFFICE

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UNITED STATES NATIONAL MUSEUM,
UNDER DIRECTION OF THE SMITHSONIAN INSTITUTION,
Washington, D. C., December 20, 1910.

SIR: I have the honor to submit herewith a report upon the present condition of the United States National Museum, and upon the work accomplished in its various departments during the fiscal year ending June 30, 1910.

Very respectfully,

RICHARD RATHBUN,

Assistant Secretary, in Charge of the National Museum.

Dr. CHARLES D. WALCOTT,

Secretary, Smithsonian Institution.

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REPORT ON THE PROGRESS AND CONDITION OF THE U. S. NATIONAL MUSEUM FOR THE YEAR ENDING JUNE 30, 1910.

By RICHARD RATHBUN,
*Assistant Secretary of the Smithsonian Institution,
in charge of the U. S. National Museum.*

INCEPTION AND HISTORY.

The Congress of the United States, in the act of August 10, 1846, founding the Smithsonian Institution, recognized that an opportunity was afforded, in carrying out the large-minded design of Smithson, to provide for the custody of the museum of the Nation. To this new establishment was therefore intrusted the care of the national collections, a course that time has fully justified.

In the beginning the cost of maintaining the museum side of the Institution's work was wholly paid from the Smithsonian income; then for a number of years the Government bore a share, and during the past three decades Congress has voted the entire funds for the expenses of the Museum, thus furthering one of the primary means "for the increase and diffusion of knowledge among men" without encroaching upon the resources of the Institution.

The museum idea was inherent in the establishment of the Smithsonian Institution, which in its turn was based upon a ten years' discussion in Congress and the advice of the most distinguished scientific men, educators, and intellectual leaders of the Nation of seventy years ago. It is interesting to note how broad and comprehensive were the views which actuated our lawmakers in determining the scope of the Museum, a fact especially remarkable when it is recalled that at that date no museum of considerable size existed in the United States, and the museums of England and of the continent of Europe were still to a large extent without a developed plan, although containing many rich collections.

The Congress which passed the act of foundation enumerated as within the scope of the Museum "all objects of art and of foreign and curious research and all objects of natural history, plants, and geological and mineralogical specimens belonging to the United States," thus stamping the Museum at the very outset as one of the

widest range and at the same time as the Museum of the United States. It was also fully appreciated that additions would be necessary to the collections then in existence, and provision was made for their increase by the exchange of duplicate specimens, by donations, and by other means.

If the wisdom of Congress in so fully providing for a museum in the Smithsonian law challenges attention, the interpretation put upon this law by the Board of Regents within less than six months from the passage of the act can not but command admiration. In the early part of September, 1846, the Regents took steps toward formulating a plan of operations. The report of the committee appointed for this purpose, submitted in December and January following, shows a thorough consideration of the subject in both the spirit and letter of the law. It would seem not out of place to cite here the very first pronouncement of the board with reference to the character of the Museum:

"In obedience to the requirements of the charter,¹ which leaves little discretion in regard to the extent of accommodations to be provided, your committee recommend that there be included in the building a museum of liberal size, fitted up to receive the collections destined for the Institution. * * *

"As important as the cabinets of natural history by the charter required to be included in the Museum your committee regard its ethnological portion, including all collections that may supply items in the physical history of our species, and illustrate the manners, customs, religions, and progressive advance of the various nations of the world; as, for example, collections of skulls, skeletons, portraits, dresses, implements, weapons, idols, antiquities, of the various races of man. * * * In this connexion, your committee recommend the passage of resolutions asking the cooperation of certain public functionaries, and of the public generally, in furtherance of the above objects.

"Your committee are further of opinion that in the Museum, if the funds of the Institution permit, might judiciously be included various series of models illustrating the progress of some of the most useful inventions; such, for example, as the steam engine from its earliest and rudest form to its present most improved state; but this they propose only so far as it may not encroach on ground already covered by the numerous models in the Patent Office.

"Specimens of staple materials, of their gradual manufacture, and of the finished product of manufactures and the arts may also, your committee think, be usefully introduced. This would supply opportunity to examine samples of the best manufactured articles our coun-

¹ Since the Institution was not chartered in a legal sense but established by Congress, the use of the word "charter" in this connection was not correct.

try affords, and to judge her gradual progress in arts and manufactures. * * *

"The gallery of art, your committee think, should include both paintings and sculpture, as well as engravings and architectural designs; and it is desirable to have in connexion with it one or more studios in which young artists might copy without interruption, being admitted under such regulations as the board may prescribe. Your committee also think that, as the collection of paintings and sculpture will probably accumulate slowly, the room destined for a gallery of art might properly and usefully meanwhile be occupied during the sessions of Congress as an exhibition room for the works of artists generally; and the extent and general usefulness of such an exhibition might probably be increased if an arrangement could be effected with the Academy of Design, the Arts-Union, the Artists' Fund Society, and other associations of similar character, so as to concentrate at the metropolis for a certain portion of each winter the best results of talent in the fine arts."

The important points in the foregoing report are (1) that it was the opinion of the Regents that a museum was requisite under the law, Congress having left no discretion in the matter; (2) that ethnology and anthropology, though not specially named, were yet as important subjects as natural history; (3) that the history of the progress of useful inventions and the collection of the raw materials and products of the manufactures and arts should also be provided for; (4) for the gallery of art the committee had models in existence, and they proposed, pending the gathering of art collections, which would of necessity be slow, to provide for loan exhibitions by cooperating with art academies and societies.

In the resolutions which were adopted upon the presentation of the report, a museum was mentioned as "one of the principal modes of executing the act and trust."¹ The work was to go forward as the funds permitted, and, as is well known, the maintenance of the museum and the library was long ago assumed by Congress, the Institution taking upon itself only so much of the necessary responsibility for the administration of these and subsequent additions to its activities as would weld them into a compact whole, which together form a unique and notable agency for the increase and diffu-

¹*Resolved*, That it is the intention of the act of Congress establishing the Institution, and in accordance with the design of Mr. Smithson, as expressed in his will, that one of the principal modes of executing the act and the trust is the accumulation of collections of specimens and objects of natural history and of elegant art, and the gradual formation of a library of valuable works pertaining to all departments of human knowledge, to the end that a copious storehouse of materials of science, literature, and art may be provided which shall excite and diffuse the love of learning among men, and shall assist the original investigations and efforts of those who may devote themselves to the pursuit of any branch of knowledge.

sion of knowledge, for the direction of research, for cooperation with departments of the Government and with universities and scientific societies in America, and likewise afford a definite correspondent to all scientific institutions and men abroad who seek interchange of views or knowledge with men of science in the United States.

Since that early day no material change has been suggested in the general scope of the Government Museum; it has only remained to elaborate the details, and the opportunity is now at hand to realize all that the first board had in view, since ample space has become available.

The development of the Museum has naturally been greatest in those subjects which the conditions of the past sixty years have made most fruitful—the natural history, geology, ethnology, and archeology of the United States, supplemented by many collections from other countries. The opportunities in these directions have been mainly brought about through the activities of the scientific and economic surveys of the Government, many of which are the direct outgrowths of earlier explorations, stimulated or directed by the Institution. The Centennial Exhibition of 1876 afforded the first opportunity for establishing a department of the industrial arts on a creditable basis, and of this the fullest advantage was taken, though only a part of the collections then obtained could be accommodated in the space available.

The department or gallery of the fine arts had made little progress, though not from lack of desire or appreciation, until within the past four years, during which its interests have been markedly advanced, as elsewhere explained.

Another subject to which much attention has been paid with satisfactory results is American history, illustrated by objects representing distinguished personages and important events as well as the domestic life of the country from the colonial period to the present day.

It is gratifying to note that the new building has now been so far completed as to permit of taking up the work of readjusting the collections, whose systematic arrangement has for many years been impossible through lack of sufficient space. To this large structure, specially erected for their accommodation, the collections of zoology, geology, ethnology, and archeology are being rapidly transferred, making available for the arts and industries the entire older building and a part of the Smithsonian building.

With its collections thus distributed between the three buildings, all fireproof and of substantial construction, the National Museum may be expected to enter upon an era of renewed prosperity and usefulness.

While it is the primary duty of a museum to preserve the objects confided to its care, as it is that of a library to preserve its books and manuscripts, yet the importance of public collections rests not upon the mere basis of custodianship, nor upon the number of specimens assembled and their money value, but upon the use to which they are put. Judged by this standard, the National Museum may claim to have reached a high state of efficiency. From an educational point of view it is of great value to those persons who are so fortunate as to reside in Washington or who are able to visit the Nation's capital. In its well-designed cases, in which every detail of structure, appointment, and color is considered, a selection of representative objects is placed on view to the public, all being carefully labeled individually and in groups. The child as well as the adult has been provided for, and the kindergarten pupil and the high-school scholar can be seen here, supplementing their classroom games or studies. Under authority from Congress, the small colleges and higher grades of schools and academies throughout the land, especially in places where museums do not exist, are also being aided in their educational work by sets of duplicate specimens, selected and labeled to meet the needs of both teachers and pupils.

Nor has the elementary or even the higher education been by any means the sole gainer from the work of the Museum. To advance knowledge, to gradually extend the boundaries of learning, has been one of the great tasks to which the Museum, in consonance with the spirit of the Institution, has set itself from the first. Its staff, though chiefly engaged in the duties incident to the care, classification, and labeling of collections in order that they may be accessible to the public and to students, has yet in these operations made important discoveries in every department of the Museum's activities, which have in turn been communicated to other scholars through its numerous publications. But the collections have not been held for the study of the staff nor for the scientific advancement of those belonging to the establishment. Most freely have they been put at the disposal of investigators connected with other institutions, and, in fact, without the help of many such the record of scientific progress based upon the material in the Museum would be greatly curtailed. When it is possible to so arrange, the investigator comes to Washington; otherwise such collections as he needs are sent to him, whether he resides in this country or abroad. In this manner practically every prominent specialist throughout the world interested in the subjects here well represented has had some use of the collections, and thereby the National Museum has come to be recognized as a conspicuous factor in the advancement of knowledge wherever civilization has a foothold.

OPERATIONS OF THE YEAR.

APPROPRIATIONS.

The maintenance and operations of the National Museum for the year covered by this report, namely, from July 1, 1909, to June 30, 1910, were provided for by the following items of appropriation contained in the sundry civil act approved March 4, 1909:

Preservation of collections.....	\$250,000
Furniture and fixtures.....	200,000
Heating and lighting.....	60,000
Building repairs.....	15,000
Purchase of books.....	2,000
Postage.....	500
Moving collections, etc.....	4,000
Printing and binding.....	34,000
Total.....	565,500

The following appropriations for the year ending June 30, 1911, were made by Congress in the sundry civil act approved June 25, 1910:

Preservation of collections.....	\$300,000
Furniture and fixtures.....	125,000
Heating and lighting.....	50,000
Building repairs.....	15,000
Purchase of books.....	2,000
Postage.....	500
Printing and binding.....	34,000
Total.....	526,500

The general deficiency act approved June 25, 1910, also contains two items relating to the Museum, one authorizing the installation of an ice plant from an existing appropriation, the other appropriating funds for certain work in completing the new building and its surroundings. These items are as follows:

“Out of the unexpended balance of the appropriation for ‘Preservation of collections, National Museum,’ for the fiscal year nineteen hundred and ten not exceeding the sum of two thousand five hundred dollars is authorized to be expended during the fiscal years nineteen hundred and ten and nineteen hundred and eleven for purchase and installation of an apparatus for the manufacture of ice for use of the National Museum.”

“For the completion of the new building of the United States National Museum and its surroundings, namely, the construction of roads and walks, grading and sodding, construction of a waterproof granolithic platform along the outer walls of the building, and the painting of the interior walls of the building, to be expended under the direction of the Secretary of the Smithsonian Institution, seventy-seven thousand dollars.”

BUILDINGS.

New building.—At the close of the year the entire exterior of the new building had been completed, with the exception of the broad steps leading to the main entrance, on which work was then in progress. Much still remained to be done in the interior of the south pavilion, including both the auditorium on the ground floor and the rotunda above, but the main part of the building lacked only certain minor features of construction and had been wholly in the possession of the Museum during the greater part of the year.

The abandonment of the rented buildings at the end of the previous year had made it necessary to move their contents, comprising large and valuable collections, to the new building in May and June, 1909. This material was placed in several of the exhibition halls where the floors had been laid and in one of the open courts, affording an excellent opportunity for overhauling and assorting a large part of the specimens. On August 10, 1909, occupation of the third story, which is divided into rooms for laboratories, reserve collections, and offices, was obtained from the superintendent of construction, although at that time the story was unprovided with doors, and temporary expedients had to be adopted for the protection of such property as was first moved. On November 9, following, the remaining stories of the main building were turned over to the Museum, and while constructive work of a subordinate character continued to be carried on during most of the rest of the year, it can not be said to have materially interfered with Museum operations.

The mechanical plant was completed in ample time to meet the requirements of the winter season, the boilers being put into permanent service on October 15, 1909, and soon demonstrating their efficiency. The heating system in the new building is by means of hot water. Steam connections with the other buildings, through the medium of an underground tunnel, were effected on November 3, and since then all of the heating of the Smithsonian group of structures on the Mall has been provided from the new plant. Electrical connections with the generators of the plant by means of cables also running through the tunnel, and finished in June, 1910, cover the same area.

Certain minor, though important, mechanical and electrical fittings have likewise been supplied. In view of the combustible nature of parts of the collection, an effective fire system has been provided,

consisting of alarm boxes of essentially the same pattern as those used by the city, and of fire extinguishers, and many lengths of hose kept attached to fire plugs. There may also be mentioned a series of call boxes throughout the building, from which the watchmen turn in their signals to the central office during each of the night rounds, and a comprehensive vacuum cleaning plant, with pipes leading to all parts of the building. A very complete system of electric wire conduits was included in the building construction, and the more necessary of these were wired in the same connection. Nearly all of the lighting fixtures required on the ground floor and third floor have been installed, and the hanging of the ceiling fixtures in the exhibition halls was well advanced before the close of the year.

As explained in previous reports, the new building, erected for the natural history collections, contains four full stories, in addition to which a large part of the attic space is available for storage. The two middle stories are designed wholly for the public exhibition of specimens, while the lower story, with the exception of one exhibition hall, and the third story are arranged for the laboratories, the storage of the reserve collections, the offices, the mechanical plant, and the workshops.

In the matter of furnishing, preference has been given to the ground and third stories over the exhibition stories, in order that the laboratories and the mass of the collections might be moved as soon as possible, and the scientific staff be established in the new building where its members could more conveniently work out the somewhat difficult problems which confront them in planning and arranging the exhibition collections under the greatly improved conditions now offered as to amount and character of space. The furniture for these two floors, except the tables and chairs, will be almost wholly of steel or steel covered. Excellent designs for the several patterns of cases required were secured, and in view of an extensive competition the prices have been kept at a relatively low figure. Some cases had been constructed during the previous year, but the work was much more actively continued during the past one, in view of the larger appropriation available. On account of the special patterns and of the excellent quality of work demanded, it was not to be expected that contracts could be promptly filled, but the results have been extremely satisfactory. The pains taken with this subject not only redounds to the profit of this Museum, but will be helpful to museums generally throughout the country, since the national establishment is looked upon as a sort of central bureau for supplying information and advice in matters of museum equipment and operation. As it was not feasible to await the completion of all or of any considerable part of the metal furniture, wooden cases from the older buildings were largely made use of in the beginning, being replaced from time to

time as the fireproof furnishings were received. The construction of exhibition furniture for the new building has thus far been limited, the current needs having been mostly supplied from the older buildings, but during the present year it will be actively taken up.

The moving of the natural history specimens from the older buildings was begun on August 11, 1909, and could readily have been finished within the year had the necessary furniture been on hand. As it was, such of the laboratories and reserve collections as were transferred were at once installed in their new quarters, however adverse the conditions might be. In respect to some divisions, however, the accommodations were so incomplete that no changes were attempted. The only exhibitions installed consisted of certain ethnological groups and historical cases arranged in the middle hall and adjacent ranges, in conjunction with the paintings of the National Gallery of Art, as described under that head. All other exhibition collections taken over were temporarily stored in their old cases.

The reserve collections transferred either wholly or in greater part were of the following subjects: Ethnology, prehistoric and historic archeology, physical anthropology, mammals, birds, insects, mollusks, geology generally, minerals, fossil vertebrates and invertebrates, and paleobotany. Those still remaining in their old quarters consisted of the reptiles and batrachians, fishes, marine invertebrates, and plants. The division of plants, for which sufficient space is not available in the new building, will be accommodated in the upper story of the main part of the Smithsonian building.

The exhibition collections destined for the new building, which at the close of the year were still displayed in the halls which they have hitherto occupied, comprised the birds and marine invertebrates in the Smithsonian building; and the American mammals, osteological specimens, invertebrate and plant fossils, minerals and gems, a considerable part of the collection of applied geology, the material illustrating historic religions and some branches of ethnology, in the older Museum building. The other exhibits in the latter building, including history, technology, art fabrics, ceramics, graphic arts, medicine, musical instruments, etc., will be kept there permanently.

The removal of collections and laboratories included the abandonment of the entire double north tower of the Smithsonian building above the main floor, thus relinquishing several suites of excellent rooms to which the Bureau of American Ethnology was transferred in December, 1909.

A supplemental appropriation by Congress made near the close of its last session provided for two important matters in connection with the new building. One of these was the grading of the grounds about the building and the construction of roads and paths leading to its entrances. The other was the painting of the interior walls, required

as much for the hardening of the plaster as for the application of color to relieve the extensive white surfaces.

Other buildings.—The repairs put upon the older buildings were of a varied character, being such as are constantly necessitated by deterioration through wear and tear and through the effects of the weather. The outside stone steps at the main entrance of the Smithsonian building were redressed and reset; the old doors were replaced by revolving doors, which will greatly improve the conditions as to heating and the inroads of dust from the adjoining pavements; while the worn floor of the vestibule was relaid with new stone, and the walls and ceiling were painted. The large second story of this building having been allotted to the division of plants, it became necessary to plan the changes and improvements required to meet the needs of the extensive herbarium, which is already in excellent condition for the transfer. This work, which includes the division of a part of the hall into separate apartments, will be taken up at the beginning of the new year.

In the interior of the older Museum building the principal repairs and adaptations consisted of the painting of walls and ceilings, the construction of macite partitions in furtherance of fire protection, and the fitting up of a part of the southeast range for taxidermal work, the older quarters in the south shed being inadequate for present purposes. The painting and repair of portions of the roofs and woodwork on the exterior of the same building constituted an item of considerable importance. The transfer of the roughing-out laboratory of physical anthropology to the stable building necessitated the overhauling of a part of that building and the addition of a ventilating stack and fans. The rooms in the south shed formerly occupied as tin and electrical shops, which are now provided for in the new building, were fitted up for certain kinds of preparators' work in biology.

During the summer and autumn of 1909 the boilers and machinery in the old Museum building were thoroughly overhauled, but in view of the extension to this and the Smithsonian building of the heating system from the new plant, as elsewhere described, the old boilers will not be used, but kept in reserve.

The furniture and fixtures constructed or purchased during the year were almost entirely for the new building. An enumeration shows that there were on hand at the close of the year 2,406 exhibition cases, 5,882 storage cases, and 2,649 pieces of laboratory and office furniture.

COLLECTIONS.

The number of specimens received during the year was approximately 970,698, of which 933,998 were biological, 17,979 geological, and 18,721 anthropological. This very large nominal increase over the receipts for any previous year, embraced in 1,450 accessions, resulted from the fact that the number of insects alone transmitted by the Bureau of Entomology of the Department of Agriculture amounted to not less than 800,000 specimens. A detailed list of the accessions is given in the latter part of this report.

DEPARTMENT OF ANTHROPOLOGY.

Ethnology.—The additions to the ethnological collections compared favorably, both in number and scientific value, with those of the previous year. An important accession, comprising 253 specimens, from the Dyaks of Pasir River, southern Borneo, was received from Dr. William L. Abbott. This material, added to the previous sendings by the same collector, forms a noteworthy monument to his energy and ability as an explorer. Another noteworthy collection, numbering 431 specimens, transferred by the United States Government Board of Managers of the Alaska-Yukon-Pacific Exposition, consists of objects brought together during a number of years by Dr. N. B. Emerson, of Honolulu. The material illustrates the tapa-making industries, the preparation of poi and other foods, canoe and house building, and costumes and customs of the vanishing Kanakas, and also includes many valuable archeological objects. A most important contribution from the Department of the Interior, formerly constituting a part of the museum of the United States Bureau of Education, comprises nearly 1,500 Eskimo specimens and 700 objects of art from Japan and other foreign countries. Also worthy of mention are a collection of brass ware, weapons, and ornaments from the Moros of Mindanao, gathered by Chaplain Joseph Clemens, United States Army; a number of native objects from British East Africa, including weapons, musical instruments and other articles, obtained by the Smithsonian African Expedition; examples of basketry from Java, contributed by Mr. Owen Bryant; a valuable series of textile materials illustrating the folk art of the country, from the Cecho-Slav Museum at Prague, Bohemia; and a number of rare Indian baskets from a cave in the Santa Barbara National Park, California, obtained through the Forest Service. A summary of all the collections received shows that 43 were from America, 6 from Europe, 3 from Japan, 3 from China and eastern Asia, 7 from the Philippine Islands, 5 from the East Indies, 8 from Polynesia and 6 from Africa.

General work on the collections was mainly connected with their transfer to the new building. The large mass of material which for

many years has been held in storage in rented quarters was carried over in bulk, unpacked and cleaned, sorted and placed in trays or otherwise cared for. The exhibition series was in large measure removed in trays and boxes, and such cases as were portable were repaired and renovated to again receive the collections in the new halls. Satisfactory progress was made in the revising of the card catalogue.

In the latter part of the winter a portion of the exhibition collection was temporarily installed, in connection with the paintings of the National Gallery of Art, in the middle hall of the new building, for the opening which occurred on March 17. Several exhibits recently received from the Alaska-Yukon-Pacific Exposition were also utilized for that occasion. At the close of the year there remained in the old Museum building the contents of certain wall cases in the west hall, and of a large number of the floor and wall cases in the north-west and west-north ranges, and in the northwest court and gallery.

The curator, Dr. Walter Hough, continued his investigations on the use of incense by the Indian tribes of the Western Hemisphere; on the basketry and textile art of the Pueblo tribes; on the distribution of gray ware in the Pueblo region; on the relation between the Mexican and Pueblo cultures, and on the Museum-Gates collection of 1905. In response to a suggestion made to the Consular Bureau of the Department of State that the Smithsonian Institution and National Museum be included in the curriculum of consular education, a class of 25 recently appointed consuls was instructed by Dr. Hough in the subject of anthropology on July 29, 1909.

Prehistoric archeology.—The accessions in this division exceeded in number those of the previous year and furnished material of exceptional scientific value. Of particular importance was a collection from Argentina, forwarded by Dr. Juan B. Ambrosetti on behalf of the Museu Ethnografico, Universidad Nacional de Buenos Aires, in exchange for North American material. It includes stone mortars and pestles, metates and mullers, hammer stones, grooved stone axes, hatchets, stone disks, stone beads, flakes of flint and obsidian, bone implements and ornaments, shell objects, implements and objects of wood, bronze implements and ornaments, and a representative series of earthenware vessels including large burial urns, bowls, pitchers, jars, dishes, etc., many with painted decorations. The collection is especially valuable for purposes of comparison with analogous relics of antiquity in North America.

A noteworthy collection obtained by Dr. J. Walter Fewkes, of the Bureau of American Ethnology, under the auspices of the Department of the Interior, from the "Cliff Palace," Mesa Verde National Park, Colorado, consists of grooved stone axes (one with the original handle), notched axes, hammer and polishing stones, paint stones,

beads, disks, drilled pendants, thin stone slabs for grinding paint, grooved sharpening stones, flint blades and arrow points; bone implements and ornaments including chisels, scrapers, punches, etc., many awls made from bones of deer and wild turkey, and a number of cylindrical beads; wooden shafts and planting sticks, ceremonial tablets, fire sticks, prayer sticks, and with handles for stone axes; earthenware bowls, ladles, jars, mugs, cups, dishes, etc. Another collection of kindred material was secured by Dr. Fewkes for the Bureau of American Ethnology from the ruins of the Marsh Pass region, Arizona, in 1909. It comprises grooved stone hammers or sledges, pitted stones, polishing stones, stone mortar, knives of flint and quartzite, and flint arrow points; an earthenware strainer, and fragments of coiled ware vessels and of painted and gray ware with designs in red and black. A third North American collection, consisting of ancient Pueblo earthenware, was donated by Mr. Stephen Janis, superintendent of the Navaho Indian Reservation, Tuba City, Arizona. Noteworthy examples are ollas and bowls of gray ware with geometric decorations in black and red; others are embellished with volutes and other figures in relief, and one jar is of coiled ware. Senator H. C. Lodge presented a Porto Rican stone collar of massive type, oval in shape and embellished with sculptured figures. A collection of much interest from Honduras and Guatemala, including numerous articles of stone, copper, and clay, was lent by Mr. A. H. Blackiston, of Cumberland, Maryland. Of special note are copper bells of varied pattern, vases elaborately decorated in glyphic designs and symbolic devices, and figures of animals and men modeled in clay.

The members of the staff of the division were mainly occupied during most of the year in preparations for and in the actual removal of the collections from the Smithsonian building to the new building, and considerable headway had been made in the work of installation in the new quarters by the end of June. The cataloguing and marking of recent accessions was kept up in the usual manner.

During the early part of the year the head curator of the department, Mr. William H. Holmes, was engaged in the study of the stone implements of the collection, in continuation of his work on an exhaustive monograph intended for publication by the Bureau of American Ethnology, but later his time was entirely taken up with matters connected with the removal of collections. Mr. A. V. Kidder, of the Peabody Museum of Archeology, Cambridge, Massachusetts, examined the collection of pottery obtained by Dr. Fewkes at the "Cliff Palace," Mesa Verde National Park. Although no field work was undertaken by the division, the explorations and excavations in the Pueblo region, by Dr. J. Walter Fewkes, of the Bureau of American Ethnology, were important for the Museum; and Mr. J. D.

McGuire's researches in the vicinity of Mount Kineo, Maine, resulted in a valuable collection of stone implements and rejectage of implement-making, which Mr. McGuire presented to the Museum through the Bureau of American Ethnology.

Historic archeology.—Among the collections received and assigned to this division were the following: Egyptian bronze figurines of Osiris, Isis, and Horus, *ushabti* figurines of faience, pottery vases, pieces of mummy cartonage and a box of wheat grains, lent by Mr. A. H. Blackiston, of Cumberland, Maryland; and 30 specimens of Turkestan pottery of the eleventh and fourteenth centuries, obtained by exchange from the Musée d'Anthropologie et d'Ethnographie de Pierre le Grand, St. Petersburg, Russia. Of objects of religious art and ceremonial were models of the Salt Lake Mormon Temple and Tabernacle, presented to the Museum by the Church of Latter Day Saints of Jesus Christ, through its treasurer and commissioner at the Alaska-Yukon-Pacific Exposition, Mr. George D. Pyper; a model in wood of the Russian Church at Sitka, made under the supervision of the Rev. A. P. Kashevaroff, and a model of the Santa Barbara Mission, California, constructed under the supervision of the head curator, both for the Alaska-Yukon-Pacific Exposition and transferred to the Museum by the United States Government Board of Managers; a model of a Hindu temple, made from the pith of the cork tree, from the Rev. William E. DeRiemer; 19 liturgical books used in the Russian Church in Alaska, the gift of the Rev. A. P. Kashevaroff; and a Catholic reliquary and six religious medals, lent by Mrs. G. Brown Goode.

Pending the removal of the collections to the new building, little work was done on the exhibition series. A small number of objects, not heretofore shown, was installed in the Egyptian section, and some labels were prepared and printed. At the close of the year, the Egyptian and a large part of the Assyro-Babylonian and Hittite collections had been transferred, but there still remained in the old building the entire series of objects of recent religious art. Studies were made of the ancient potteries, with a view to their arrangement under the new conditions.

Physical anthropology.—Of the accessions received by this division, which were numerous and of exceptional value, the most important was that of the Egyptian remains, which, through the courtesy and generosity of the Metropolitan Museum of Art, in New York, Dr. Aleš Hrdlička, curator of the division, was enabled to make in connection with the extensive excavations that are being conducted by that Museum. The value of this collection is greatly enhanced by the fact that every specimen is well identified chronologically. Other noteworthy accessions were about 100 Indian skulls, with other bones, from Newport, Madison, and Marked Tree, Arkansas, obtained and

presented by Mr. Clarence B. Moore, of Philadelphia, Pennsylvania; 16 skulls, received in exchange from Prof. David Paul von Hansemann, Rudolf Virchow-Krankenhaus, Berlin, Germany; 6 casts of ancient human and primitive Australian crania, obtained by purchase; a cast of an ancient human lower jaw, known as "the Heidelberg jaw," the gift of Prof. Otto Schœtensack, of Heidelberg, Germany; 20 human skulls, transferred from the Army Medical Museum through Maj. T. T. Russell, United States Army, curator; 25 brachycephalic skulls of Czechs, received in exchange from Prof. J. Matiegka, of Prague, Bohemia; 28 negro skulls, from the Smithsonian African Expedition; 6 specimens of articulated hands and feet, through exchange with Prof. Gustav Schwalbe, University of Strassburg, Germany; a large number of anatomical specimens presented by Prof. F. P. Mall, of Johns Hopkins University, Baltimore; a skeleton of an Australian native, in exchange with the Western Australian Museum and Art Gallery, Perth, Australia; the skull of a Flathead Indian and 2 head-flattening pillows, donated by Capt. Newton Chittenden, Brooklyn, New York; 23 important anatomical preparations, contributed by Dr. D. S. Lamb, of the Army Medical Museum, Washington; and two collections of valuable anatomical material, presented, one by Dr. Robert Bennett Bean, the other by Dr. Winsor, both of the Philippine Medical School, Manila.

This division was one of the first to move into the new Museum building, and since September attention has mainly been given to fitting up the laboratories and rearranging and relabeling the collections. A considerable amount of material has been brought together preparatory to installation in the exhibition cases now provided in the laboratory. The series of Indian busts on general exhibition has been increased by the addition of five new casts made in the Museum.

Investigations were concluded by the curator on the Arkansas and Louisiana crania presented by Mr. Clarence B. Moore, and the results published by the Academy of Sciences of Philadelphia. Measurements of the capacity of these crania have been made and await elaboration. A very important collection of Eskimo skulls and skeletons, forwarded by the American Museum of Natural History, was studied and the report submitted to that Museum. Some progress was made toward the completion of investigations on the humerus in the different races, and a large amount of work was done on the report concerning the ancient and modern inhabitants of the Oasis of Kharga, Egypt. An account of two Texas crania was furnished the Bureau of American Ethnology, and detailed measurements of certain southern California Indian skulls were sent to Dr. P. Rivet, Laboratoire d'Anthropologie, Museum d'Histoire Naturelle, Paris. On April 1, 1910, the curator sailed for Argentina, South America, to conduct

examinations regarding the antiquity of man in that country, and at the close of the year satisfactory progress had been made.

Technology.—The most important addition to this division was a collection received from the Navy Department, consisting of 82 rifles, carbines, and muskets, which had been kept as an historical exhibit at the League Island Navy Yard, Philadelphia, for several years. A few of the most interesting examples are typical pieces from the Virginia Manufactory, Richmond, Virginia, of dates 1816, 1818, and 1819; a musket from the Palmetto Armory, Columbia, South Carolina, 1852; several Harpers Ferry muskets, including the rare Plymouth pattern of 1858; a Whitneyville rifle of 1863; a rare breech-loading rifle made by A. H. Waters & Co., Milbury, Massachusetts; a standard United States Army rifle altered by the Confederate Government and stamped "Cook and Brother, Athens, Georgia, 1864;" a Potsdam musket of 1833; Tower muskets and carbines of various lengths and calibers, some of early dates; and good examples of Colt, Sharps, White, and Maynard arms. Two sets of aerodynamic models in wood, devised by Dr. Albert F. Zahm in 1903, in the laboratory of the Catholic University of America, Washington, District of Columbia, and employed by him for determining the atmospheric resistance of symmetric spindles and wedge-shaped models, and the best form of hulls for motor balloons and flying machines, have been deposited by Dr. Zahm. A number of interesting sundials designed and constructed by Mr. Claude L. Woolley, of Baltimore, Maryland, and presented by him, are especially instructive as showing the different forms of dials adapted to the latitude of the Panama Canal Zone, 8° 57' north, Washington, District of Columbia, 38° 55' north, and Nome, Alaska, 64° 30' north. Mr. Woolley has also contributed a vertical sundial adapted to the latitude of Boston, 40° 21' north, and a noon mark to be used in any latitude. A model likewise received from him represents a rare dial known as the reclining cross type, which is made for the latitude of New Orleans, 29° 55' north, and bears the inscription, "Aspiciendo senescis."

A pin machine, the gift of the Howe Manufacturing Company, Derby, Connecticut, invented by Dr. John Ireland Howe in 1835, is said to be the first successful machine constructed for automatically making complete pins. It was put in operation by this company in 1838, was kept in service until about 1865, and had a capacity of 60 pins a minute. Models of the unarmored protected cruiser *Atlanta* and the armored cruiser *Pennsylvania* were deposited by the Navy Department. A most noteworthy and valuable collection of 153 chronometers and watches, comprising many superior, full-jeweled, and finely finished timepieces, the productions of the best makers of their time, American and foreign, was donated by Dr. Thomas Featherstonhaugh, of Washington, District of Columbia. Sixty-four articles,

embracing Japanese astronomical instruments, electrical apparatus, microscopes, surveying instruments, and standard mechanical gauges, and 208 small wooden models of agricultural implements of primitive and advanced designs, were transferred from the museum of the United States Bureau of Education. One hundred and thirty-three objects, comprising ancient matchlock, wheel-lock and flintlock guns and pistols, a large number of East Indian and Filipino swords, daggers, and knives, and several more modern arms, were lent by Mrs. Charles W. Hickman, of Augusta, Georgia. The collection contains many specimens which are not only superior as effective weapons, but also remarkable for their artistic design.

All of the material belonging to this division which had been taken from the Ninth Street annex and the armory shed to the new Museum building for overhauling in the spring of 1909 was carefully examined, classified, and scheduled. Every box was opened, every specimen inspected, and an accurate record of each was made. In April, 1910, following the completion of this task, it was moved over to the old Museum building, in which the division will remain, as many of the objects as possible being placed in the exhibition cases available. With few exceptions, the accessions of the year have also been put on exhibition. No extended investigations were undertaken by members of the staff, but many persons from outside have made use of the collections, either for research or for purely practical ends.

Ceramics.—Among the additions to the ceramic gallery, which were very few, the following loans may be mentioned: Three fine examples of yellow Chinese porcelain to the valuable collection of Miss E. R. Scidmore, of Washington; 19 specimens of Hispano-Moresque and Brower ware, and other objects of interest, from Miss Julia Chadwick, of Washington; 4 examples of cloisonné enamel, a cinnabar lacquer box, and an ancient Roman terra-cotta head, from the estate of Olive Risley Seward, through Miss Sara Carr Upton, executrix; a lacquered vase presented to Dr. James Chadwick by the Emperor of Japan, from Mr. Robert Hinckley, of Washington; an "Apostle" pitcher, from Mrs. Mary C. Blandin, of Glenarm, Maryland; and 46 pieces of old English china formerly belonging to the Haswell and Plimpton families of Vermont and Massachusetts, from Miss Katherine Noyes, of Washington. The Olive Risley Seward collection was rearranged and labeled by Miss Upton.

Graphic arts.—Many examples of reproductions by new processes, both of black and white and of color prints, were received during the year. A mezzotint of John Randolph, by Sartain, presented by Mr. David Sulzberger, of Philadelphia, is an important contribution to the historical series of engravings, being a representative example of the work of this noted American engraver. Among the additions in photography were two exquisite portraits of a lady, in platinum,

and four remarkable portraits of a girl, on Royal Nepera paper, presented by the Eastman Company, of Rochester, New York. There is now assembled an excellent collection to illustrate the history of photography from the earliest period to the present time, which it is expected to prepare and install during the current year. It includes both apparatus and pictures, and contains many rarities.

Musical instruments.—The following were among the additions to this section: Three Japanese musical instruments—a treble guitar, direct bass flute, and fiddle—obtained by the late Mrs. James M. Flint in Yokohama and presented by Dr. Flint; a series of drawings, tracings, and notes relating to violins, their manufacture, dimensions, and characteristics, both old and new, collected by Mr. Gilbert Thompson and donated by Miss A. G. Thompson, of Washington; a melodeon made in Pittsfield, Massachusetts, by William Pierce, prior to 1863, formerly the property of Dr. Theodore F. Hance, and contributed by his estate, through his daughters, the Misses Emma and Eleanor W. Hance, of Washington; a “marimba” of the most recent type, used by the natives of Yucatan, presented by Mr. Emil Mosonyi.

Medicine.—This division acquired a number of surgical instruments, cases of medicine, microscopic slides, and other interesting material.

History.—The accessions received by this division contained much that is noteworthy. A collection of 38 pieces of table porcelain bearing the insignia of the “Society of the Cincinnati,” made in China for David Townsend, of Massachusetts, in 1790, was lent by Mr. Thomas Gerry Townsend. Accompanying it is the diploma of membership of David Townsend in the Society of the Cincinnati and a letter from Samuel Shaw, dated 1790, relating to the procurement of the china. A number of personal relics of Rear Admiral Charles Wilkes, United States Navy, were deposited by his daughter, Miss Jane Wilkes, of Washington, including a handsome jeweled sword presented by the city of Boston in 1862, a gold medal conferred by the Royal Geographical Society of London in 1848, a service sword, hat, epaulets, and other articles used by the admiral, then a lieutenant, during his command of the United States Exploring Expedition of 1838–1842. Many personal memorials of the distinguished astronomer Simon Newcomb, bequeathed by him to the United States Government for exhibition in the National Museum, were deposited by Mrs. Newcomb, though possessing the right to retain them during her life. The collection embraces the uniform and sword of Prof. Newcomb, who had the rank of rear admiral in the United States Navy, two orders of the Legion of Honor of France, various gold and bronze medals and tablets, a large jasper vase on a black marble pedestal presented by the Observatory of Poulkova, Russia, a pair of bronze vases from the Imperial University of Tokyo, and

118 diplomas and announcements of honor conferred by universities and other learned bodies for distinction in science. A portrait in oil of Prof. Newcomb, by C. H. L. Macdonald, has been placed temporarily in the Museum by Mrs. Newcomb. The uniform coat worn by Admiral Farragut while lashed to the rigging of the ship *Hartford* during the battle of Mobile Bay, August 4, 1864, was presented by Mrs. Pauline Philip Lapidge, of Rockville Center, New York; and a silver snuffbox given by President Millard Fillmore to his wife in 1862 was donated by Mrs. Florence A. Rockwell Judd, of New York City.

The National Society of the Colonial Dames of America added, among other objects, to its collection of relics deposited in the Museum a silver baptismal basin which was sent from Holland in 1694 to the first Dutch church on Manhattan Island. The heirs of Mrs. Virginia L. W. Fox presented the Gustavus Vasa Fox collection of books illustrating Russian life and history. Printed, for the most part, in the Russian language, these works are remarkable for their handsome bindings and exceedingly fine engravings. Mrs. Julian James, of Washington, added to her loan collection 51 pieces of silver and glassware and two miniatures belonging to the Bailey-Myers-Mason family, and a sword belt and scabbard. Sixteen American historical paintings by Trumbull, Charles Willson Peale, Rembrandt Peale, and other noted artists were lent by Dr. George Reuling, of Baltimore, Maryland. A portrait in oil of Dr. Edward Maynard, by his son, George W. Maynard, of New York City, was presented by the artist. Seven handsome silver trophies, won in rifle competition by the Marine Corps of the United States Navy, and a silver cup, won by a boat crew of the marines of the U. S. S. *Illinois*, were received on deposit. Five pieces of silver—two punch bowls, two cups, and one pitcher—presented to the late Gen. Henry C. Corbin by his fellow army officers in 1901, were lent by Mrs. Corbin.

An especially noteworthy accession was a bronze tablet 7 feet wide by 14 feet high, showing life-size relief figures of Edward F. Beale and Kit Carson, and commemorating an incident of the war with Mexico, which is explained in the inscription on the tablet as follows: "The army sent from Santa Fe to occupy California was met and defeated by the Mexicans at San Pasquale. The American forces were driven upon a butte in the desert, on which there was no water, and there surrounded by the Mexican forces. Edward F. Beale and Kit Carson, both famous explorers of the West, volunteered to get through the Mexican lines and get reinforcements from Stockton's fleet at San Diego. They succeeded in crawling past three cordons of Mexican sentries in the night, and by hiding in ravines in the day and travelling by night they reached Stockton's fleet after enduring great hardships." This tablet, which is of high artistic design, was

executed by Mr. Isidore Konti on a commission from the Hon. Truxton Beale, son of Gen. Beale who at the time of this episode was an acting lieutenant in the Navy. Mr. Beale has happily selected the new building of the National Museum as an appropriate place for the tablet, which has been installed on one side of the north entrance vestibule, and was informally unveiled on May 31, 1910, in the presence of members and friends of the family, brief remarks being made by Senator George C. Perkins.

A large model in plaster and a perspective drawing of Andrew O'Connor's competitive design for the Commodore Barry monument was presented by Mr. Jeremiah O'Connor, of Washington. One of the four sledges with which Commander Robert E. Peary, United States Navy, reached the North Pole on April 6, 1909, and also a pick and pair of snowshoes, were contributed by Mr. H. L. Bridgman, of New York City.

Among gifts to the collection of coins and medals were 24 papal and other medals from Mr. Joseph Pagani, of Washington; 38 Venetian and Byzantine coins from Georgius Constandenethos, of Brooklyn, New York; and a set of the nine official medals and two badges struck in commemoration of the Hudson-Fulton celebration in New York City in 1909, from the Hudson-Fulton Celebration Commission.

To the collection of portraits were added 88 photographs of persons mostly connected with the history of the Smithsonian Institution, the gift of Dr. Theodore Gill, and over 300 photographs of members of the Medal of Honor Legion of the United States, presented by the Legion through Mr. Walter Thorn, commander.

Other accessions worthy of mention were a valuable set of casts of cameos of classical subjects, photographs of prominent educators, and photographic copies of old maps, transferred by the United States Bureau of Education; maps, facsimiles of treaties, photographs of early newspapers, portraits of historic personages, and various interesting objects illustrating the history of the Pacific coast and the Hawaiian and Philippine Islands, being part of the Smithsonian exhibit at the Alaska-Yukon-Pacific Exposition, transferred by the United States Government Board of Managers.

The collection of Washington relics and the Copp collection of colonial relics were moved in March to the new building, where they were temporarily installed at the north end of the middle hall as a part of the exhibition opened on the 17th of that month. They will, however, be restored to their places in connection with the general historical collections when the necessary arrangements have been effected.

Anthropological laboratory.—The activities of the departmental laboratory were, as heretofore, confined largely to work in plaster and to repairing and poisoning specimens. The commodious quarters in

the new building were occupied early in the year and progress has been made in classifying and properly caring for the large body of duplicate casts and molds and in installing the fittings. The laboratory is in charge of Mr. Henry W. Hendley, assisted by Mr. Joseph Palmer, modeler. Although the work is much diversified, the services of Mr. Hendley being frequently called for by other departments, much of the time has been devoted to modeling and casting Indian busts, casting fossils, medals and archeological objects, and repairing and otherwise caring for the numerous lay figures and lay-figure groups.

DEPARTMENT OF BIOLOGY.

The largest and most noteworthy accession of the year in the department of biology was that received from the Smithsonian African Expedition, under the direction of Col. Theodore Roosevelt, of which an account is given under the head of explorations. The collection is especially rich in mammals and birds from east Africa, though other groups are well represented. The United States Bureau of Fisheries made several large and important transfers, consisting mostly of material which had been studied and described, and including many types. Another important source of material was the expedition to Java by Mr. Owen Bryant, of Cohasset, Massachusetts, accompanied by Mr. William Palmer, of the Museum staff. The collection, in which the Museum shares equally with Mr. Bryant, represents a wide range of subjects.

Mammals.—Besides the material from Africa and Java, above referred to, the more noteworthy additions of mammals comprised 200 specimens from China, of which the majority of the species represented were new to the Museum, collected by Mr. Arthur de C. Sowerby; 139 specimens from eastern Borneo, collected and presented by Dr. W. L. Abbott; and 30 specimens, including a rare monkey and a giraffe from the type localities of the species, donated by Mr. John J. White, of Washington, District of Columbia, by whom they were obtained during a hunting trip in British East Africa. Twenty-three interesting Australian mammals were received in exchange from the Western Australian Museum and Art Gallery at Perth.

During the first nine months of the year the work of this division was chiefly of a routine character, and much progress was made in arranging and labeling the skulls of rats, mice, and bats, and the skins of several genera of rodents, of which there are large series. In April, 1910, the general reserve collection was moved to the new building, where it now occupies the entire ground floor of the northwest range, and the mammal collection of the Biological Survey, the adjacent west range. The increased space and facilities in these quarters permit a thorough overhauling of the material and a careful systematic

arrangement was at once commenced. All of the primates, carnivores, ungulates, edentates, marsupials, and monotremes have been placed in order, and at the close of the year it was possible to promptly locate any particular specimen belonging in these groups, or all of the specimens of any of them. The type specimens, of which the number is exceedingly large, have been arranged in the bottom tier of cases on the north side of the range where they are most accessible and can be examined under the best conditions as to light. The work of getting the more extensive orders of small mammals, especially the rodents, in proper sequence was also begun, but there are so many of these that, even with what has been accomplished in previous years, some time must still elapse before this task can be completed. The rabbits, however, have already been arranged.

Many boxes which had long been stored in the rented buildings were unpacked, the skins distributed to their proper places in the laboratory and the skulls and skeletons set aside for adding to the osteological collection, which, together with the specimens in alcohol, still remains in the old building. Eighty-five skins were made up and 65 old mounted skins dismounted for addition to the reserve series. Forty-six skeletons and 6,538 skulls were cleaned for study, and 11 skeletons were roughed out preparatory to cleaning. Much work was done in connection with the mammals from the African expedition, especially in unpacking, inspecting, and cataloguing specimens, and preparing material for tanning.

The head curator of the department of biology, Dr. Frederick W. True, completed his description of the Museum collection of beaked whales, family Ziphiidæ, of which the proof was read before the close of the year. He also identified a large collection of the bones and teeth of mammals from the shell-heaps of Hancock County, Maine, on which subject he has a paper well in progress. The curator of the division, Mr. Gerrit S. Miller, jr., practically finished his work on the large European collections mentioned in the last report, and spent considerable time in classifying material recently acquired from Java, the Philippine Islands, China, and Africa. Some papers bearing on these studies were published, while others are still in press. Dr. M. W. Lyon, jr., before his resignation to accept a position elsewhere in Washington, had made considerable progress with his report on the Abbott collection of mammals from Borneo, which he expects soon to finish. Mr. N. Hollister, his successor as assistant curator, besides publishing the three articles mentioned in the bibliography, continued work on a monograph of the muskrats, which he commenced before entering the Museum service. Dr. Edgar A. Mearns, United States Army, studied the cottontail rabbits, of which he described a new form.

Mr. Edmund Heller, on his return from Africa in the spring, was assigned the difficult task of working up the entire mammal collection from the Smithsonian expedition, which will occupy his time for perhaps two years or more. While still in the field he forwarded several papers descriptive of new species, which were immediately published by the Institution and Museum. Dr. D. G. Elliot, of New York City, examined the collection of monkeys and lemurs for information to be used in connection with a monograph of the primates which he is preparing. Mr. W. H. Osgood, of the Field Museum of Natural History, who is writing a report on the African mammals in that museum, studied the older African collections here.

Birds.—The principal accessions of birds, as of mammals, were from east Africa and Java. Next in importance was a collection from Polynesia, made by Dr. C. H. Townsend during one of the early Pacific cruises of the Bureau of Fisheries steamer *Albatross*, of which he was then the naturalist. It comprises 391 specimens and about 85 species, many of which are new to the Museum or were previously represented only by old and faded specimens dating back to the United States Exploring Expedition of 1838–1842. The types of three species of swiftlets (*Collocalia*) are included, and there is a good specimen of the rare sandpiper, *Aechmorrhynchus cancellatus*, which has been reported as extinct. Thirty-nine birds and one nest from East Borneo and the islands of the Java Sea, including a pheasant, *Polyplectron schleiermacheri*, new to the collection, were presented by Dr. W. L. Abbott. There were two contributions of birds from the island of Luzon, one of 64 specimens from Dr. H. C. Curl, United States Navy, the other of 33 skins and 2 eggs from Mr. D. B. Mackie, of the Bureau of Agriculture, Manila. Mr. Henry D. Baker, American Consul at Hobart, Tasmania, transmitted 24 Australian birds. Thirty-four Chinese birds, including a pheasant, *Grossoptilon tibetanum*, were received in exchange from the Hon. J. E. Thayer, of Lancaster, Massachusetts. In appreciation of work done by the Museum in the identification of natural history material, the Peruvian Government, through Dr. R. E. Coker, donated 47 skins and a few alcoholic specimens, besides 33 eggs, including a number of interesting water birds. One hundred and six African birds, chiefly from Mount Ruwenzori, needed for comparison, were purchased.

Three hundred and eleven land and water birds from Virginia, mostly from Smith's Island, were contributed by the collectors, Dr. E. A. Mearns, Mr. J. H. Riley, and Mr. E. J. Brown. A fine series of 1,319 eggs and five nests, including several rarities, which had constituted the collection of the late Clarence H. Morrell, was presented to the Museum by his sister, Mrs. Ethel Morrell Hooper, of Exeter, New Hampshire, and three eggs of the rare Bachman's

warbler were donated by Mr. George C. Embury, of Cornell University. Eleven birds of paradise were purchased for the exhibition collection. Twenty-nine skins and five skeletons of birds were received from the National Zoological Park. They included a male north African ostrich, presented to President Roosevelt by Emperor Menelik of Abyssinia, two examples of the *Jabiru mycteria*, one of the whooping crane, *Grus americana*, one of Burmeister's caracara, *Chunga burmeisteri*, one of the Timneh parrot, *Psittacus timneh*, and a rhea, *Rhea darwini*. By transfer from the United States Biological Survey, 110 birds' eggs and three nests, chiefly from Mexico, were obtained.

The reserve collection of birds was moved to the new building in August, 1909. The eggs had previously been transferred, but were not permanently placed until in December of the same year. The overcrowding of the skins in the old building had been so great that it was found necessary to immediately order over 70 additional cases to provide for a reasonable spreading of the collection, and soon thereafter half as many more to accommodate the current accessions, including those from east Africa. Delays in securing all of the drawers and fittings for the new cases, however, prevented the completion of the arrangement of the specimens within the year.

Much work of a routine nature, in addition to the above, was put upon the collection. During the earlier period of the Museum and before the present fine distinctions between species and varieties were recognized, much material now known to be of exceptional value was unfortunately included in the duplicate series which were widely distributed. A careful examination of the older records, with the object of determining as far as possible the location of desired specimens, has been going on for a considerable time, and some important types have already been recovered. There has been the customary amount of labeling and cataloguing, and identifications were printed on 5,733 labels, including the remaining parts of Dr. Abbott's collections. The specimens from all accessions of the year, including the African and Javan expeditions, were catalogued. A temporary assistant was employed for five months to help in the record work and the arrangement of specimens, but some time is still required to cover all of the arrears and place the collections and records of the division on a thoroughly satisfactory basis.

The fifth volume of the manual of North American birds, by the curator, Mr. Robert Ridgway, was completed except as to the family of woodpeckers, and it is expected that the manuscript will be ready for the printer by October, 1910. For examination in connection with this work, 6,529 birds were borrowed from other institutions. Dr. C. W. Richmond, assistant curator, added about 1,500 cards to the catalogue of genera and species of birds. Mr. H. C. Oberholser continued studies on the East Indian collections of Dr. Abbott. An

arrangement was made with Mr. A. C. Bent, of Taunton, Massachusetts, who volunteered to take up at his own expense, the unfinished work on the life histories of North American birds, so well begun by Maj. Bendire and continued by Dr. Ralph. Mr. Bent examined the unpublished manuscripts and notes on the subject preserved at the Museum, and also made a trip to the Breton Island reservation.

Birds to the number of 503 were lent for study, the principal loan having been made to Mr. W. E. Clyde Todd, of the Carnegie Museum, who is preparing a revision of the ground doves of the genus *Chamæpelea*. Ornithologists who visited the Museum and the material which they examined were as follows: The late J. F. Ferry, of the Field Museum of Natural History, Costa Rican birds; Mr. L. A. Fuertes, of Ithaca, New York, the collection of pheasants, with a view to making colored drawings of some of them for an illustrated monograph of the group; Mr. B. H. Bailey, of Coe College, North American and Asiatic birds; Mr. B. H. Swales, of Grosse Isle, Michigan, specimens, records, and books for information relative to the birds of Michigan; Mr. Outram Bangs, of the Museum of Comparative Zoology, Chinese and other Asiatic birds, for the purpose of identifying Chinese specimens collected by the Thayer expedition; Mr. Thomas Barbour, of the same museum, parrots from the West Indies and New Guinea; Mr. William Brewster, also of the same museum, the collection of bitterns; Mr. Edward Arnold, of Detroit, the collection of birds' eggs; Mr. John J. Boyce, of Juneau, Alaskan birds and eggs, especially of the genus *Brachyramphus*.

Reptiles and batrachians.—About 1,800 reptiles and batrachians were received from the African expedition and about 600 from the Bureau of Fisheries, a considerable part of the latter having been collected in the Philippine Islands. Maj. J. M. T. Partello, United States Army, presented 6 specimens, including a remarkable undescribed lizard, from the Philippines, and Dr. W. L. Abbott, 13 specimens, chiefly marine snakes, from Borneo. Mr. Arthur de C. Sowerby transmitted 66 specimens from northern China. Dr. Aleš Hrdlička obtained 34 reptiles during his trip to Egypt, and Dr. V. Brazil sent 24 Brazilian snakes as a gift. The Museum of Comparative Zoology furnished 16 cotypes of West Indian lizards, *Anolis*, in exchange, while Mr. Thomas Barbour, of the same museum, donated 20 reptiles and batrachians from various tropical localities, including an example of the interesting Surinam toad, *Pipa americana*. Eighty-seven specimens, mostly collected in Colorado by Mr. M. Cary, were received by transfer from the United States Biological Survey. The Hon. J. D. Mitchell, of Victoria, Texas, presented the type specimen of the lizard *Engystoma areolatum*.

An important work of the year was the beginning of a card catalogue of specimens, for which special help was employed. The

contents of about 4,400 jars, containing about 15,000 specimens, were entered in this way, the task involving the critical examination by the curator of all the specimens and of the records relating to them. The entire collection of North American batrachians and the majority of the North American lizards were gone over in this manner before the close of the year. On account of these routine duties, the curator, Dr. Leonhard Stejneger, had little time for scientific investigations, though some progress was made in his study of the herpetology of the Philippine Islands.

Fishes.—The division of fishes received about 37,000 specimens. The transfers from the United States Bureau of Fisheries were exceptionally large and valuable, representing important investigations and containing many types. They may be summarized as follows: A collection of 1,297 specimens from the expedition of the steamer *Albatross* to the south Pacific Ocean in 1899–1900; over 1,285 specimens from the *Albatross* expedition to the eastern Pacific Ocean in 1904–5; specimens from Lake Maxinkuckee, Indiana, and vicinity, collected in 1899 and 1900; specimens from Ohio, Lake of the Woods Basin, and the Panama Canal Zone; and miscellaneous collections from various localities, aggregating about 28,000 specimens. About 100 specimens were received from the Smithsonian African Expedition, and many examples from the field work of Mr. Bryant and Mr. Palmer in Java. A valuable series of several hundred specimens collected in British Guiana by Dr. C. H. Eigenmann was obtained in exchange from the Carnegie Museum. The International Fisheries Commission, through Dr. D. S. Jordan, contributed a collection of white fish, trout, etc., from the Great Lakes; and the Gulf Biologic Station at Cameron, Louisiana, presented the type and cotype of *Leptocerdale longipinnis*. Mr. A. C. Weed, aid in the division, while conducting investigations on the pickerel and allied forms at Sodus Bay, Lake Ontario, prepared a well-selected series of the fishes of that region for the Museum collection.

The routine work on the collection of fishes, which has now grown to an immense size, was chiefly in the direction of placing it in such condition that upon its removal to the new building, expected to occur during the summer of 1910, it could be quickly arranged in systematic order and made conveniently accessible for reference and study. This has long been impossible in the old quarters, which are both inadequate and unsuitable, and space vacated by other divisions was temporarily assigned for the purpose. The sorting and separating of specimens and groups, especially of types, and the marking of the latter in a definite manner, has been a slow and difficult task. In all cases, and they are many, where a particular specimen has been designated as the type, this has been preserved apart even if previously associated with other specimens from the same locality,

a work which has required extended examination and will be appreciated by all who may have occasion to consult the collection. Being provided with distinctive labels, any type or group of types can be readily found as soon as the new arrangement is completed. Specimens to the number of 14,128 were entered in the record books, many cards were added to the card catalogue, and many jars were labeled.

A collection of fishes from Vancouver Island, British Columbia, was the subject of joint study by the assistant curator, Mr. Barton A. Bean, and the aid, Mr. A. C. Weed, who also have in preparation a new set of instructions for collecting and preserving fishes. Among those who made use of the collections during the year were assistants of the Bureau of Fisheries, Dr. Theodore Gill, and Mr. C. V. Burke, formerly of Stanford University.

Insects.—The most important accessions of the year consisted of transfers from the Bureau of Entomology of the Department of Agriculture, including the following: A collection of insects injurious to forest trees, mainly coleoptera of the family Scotytidæ, comprising some 800,000 specimens, assembled in connection with the investigations on forest insects which have been carried on by the bureau for a number of years; 5,000 miscellaneous insects collected at Tampico, Mexico, by Mr. E. A. Schwarz; about 200 specimens of coleoptera, identified by Mr. A. L. Montandon; 500 microlepidoptera, and 200 bred parasitic hymenoptera. About 400 specimens of sawflies, of which many are types and paratypes, were presented by Mr. S. A. Rohwer, of the Bureau of Entomology; 406 named Tasmanian coleoptera were received as a gift from Mr. H. D. Baker, American consul at Hobart; some 500 specimens of miscellaneous insects were contributed by the Washington Biologists' Field Club; and about 1,000 Japanese coleoptera were obtained in exchange from Mr. John D. Sherman, jr., of Brooklyn, New York.

The division of insects was moved to the new building in August, 1909, and occupies the entire northwest range on the third floor, with the exception of two rooms. The new quarters are far more commodious than the old and much better adapted to the needs of the division. Additional metal cases and drawers of the improved form were provided, and the transfer of specimens to them has been going on as rapidly as practicable. Much more remains to be done in this direction, however, and considerable time will be required to place the material already on hand in proper shape for reference. Most progress has been made with the lepidoptera, coleoptera, hymenoptera, and hemiptera. The number of drawers used in making transfers of lepidoptera alone was 700, and the cards necessary for locating their contents were also written. With the assistance of several temporary preparators eight collections, containing many thousands of specimens, were mounted and labeled.

A joint monograph on the mosquitoes, family Culicidæ, by Dr. L. O. Howard, curator, Dr. Harrison G. Dyar, custodian, and Mr. Frederick Knab, of the Bureau of Entomology, was completed. Mr. J. C. Crawford, assistant curator, continued his studies of the hymenoptera. An important publication by Mr. Nathan Banks, custodian, consisted of directions for collecting and preserving insects, issued as a bulletin, which replaces the well known work by Prof. C. V. Riley, now become in large part obsolete.

Insects to the number of over 9,000 were borrowed by specialists during the year, the more important loans having been as follows: Bees and wasps to Dr. H. T. Fernald, of Amherst, Massachusetts, who is working up the genus *Bombus* and the subfamily Aporinæ; bees of the genus *Ceratina* to Mr. H. S. Smith, and flies of the family Sarcophagidæ to Mr. W. R. Thompson, both of the Gipsy Moth Parasite Laboratory, Melrose Highlands, Massachusetts; and hemiptera of the subfamily Triozinæ to Mr. C. F. Baker, of Pomona College. There were also sent to Mr. William Schaus, at London, England, for study and comparison, a selection of about 5,000 butterflies from the important collection which he has presented to the Museum. Among persons not connected with the Museum who spent more or less time in the study and examination of the collections of insects may be mentioned Mr. Nicolas Kourdumoff, of the University of Kief, Russia; Dr. T. F. Dreyer, of Cape Town, South Africa; Dr. Arthur Neiva, of the Instituto Oswaldo Cruz, Rio de Janeiro, Brazil; Mr. W. S. Regan, of the Massachusetts Agricultural College; Prof. J. B. Smith, of Rutgers College; Mr. W. R. Thompson and Mr. H. S. Smith; Dr. Carroll Fox, of the Hygienic Laboratory, Washington; Mr. C. R. Ely, of Washington; and Mr. A. B. Gahan, of College Park, Maryland.

Mollusks.—The most noteworthy addition of the year was a collection of about 1,000 land shells from the Smithsonian African Expedition, obtained chiefly on the slopes of Mount Kenia by Dr. E. A. Mearns. Although the number of species is not large, it is thought that, coming from a region not previously explored, a good proportion may be new. The Philippine Bureau of Science transmitted for identification a collection of land and fresh water shells, from which a series is to be retained by the Museum, and Father Antonio Arnalot, of Davao, Mindanao, contributed over 400 mollusks, also from the Philippines. Cotypes of 41 species of Australian mollusks were presented by Dr. J. C. Verco, of Adelaide, South Australia; and a set of Peruvian shells, including the types of three new species, collected by the Hon. Hiram Bingham, was obtained through Dr. L. J. Cole, of the University of Wisconsin, in return for assistance in the naming of material. During a journey in Mexico Mr. C. R. Orcutt, of San Diego, California, secured a number of interesting land shells, several not

previously described, representatives of all of which were donated by him to the Museum. The Geological Survey of Canada, through Dr. John Macoun, contributed a series of mollusks, including cotypes of 16 new species, dredged in Barclay Sound, Vancouver Island. Types of new species and other specimens from the coast of California were presented by Miss J. M. Cooke, Dr. Fred Baker, Mr. C. W. Gripp, Mrs. E. E. Johnston, and Dr. R. H. Tremper. Mr. and Mrs. T. S. Oldroyd, of California, long-time contributors to the Museum, transmitted very acceptable material at various times during the year. A miscellaneous collection of shells, chiefly European, was received from Lieut. Col. L. Worthington Wilmer, of Ryde, England, to whom the Museum has also become indebted for many past favors.

The entire collection of the division of mollusks, to which the third story of the west range had been assigned, was moved to the new building in August, 1909. The study or reserve series has already been arranged in new metal cases specially constructed for the purpose, but the exhibition series remains in the condition as transferred, awaiting the determination of a plan for its enlargement and installation on a more comprehensive basis than heretofore.

About 5,300 lots of specimens were catalogued, labeled, and added to the reserve series. The Philippine collection, mainly from the *Albatross* explorations of 1910, is gradually being cleaned and made ready for study, and much progress has been made in preparing the west American material with the view of monographing the fauna. In the preliminary work of sorting the dry Philippine specimens about 29,000 labels were written. From deep sea dredgings, chiefly by the vessels of the Bureau of Fisheries, there has accumulated a large amount of fine material from the ocean bottom in different parts of the world. While consisting chiefly of the remains of the lowest forms of life, such as foraminifera, this material also contains immense numbers of small and even minute mollusks. The sorting out of the specimens is a slow and tedious task, in which something has been done from year to year. With special assistance, however, 90 lots of the material were completely and carefully gone over during the past year, with the result of obtaining not less than a quarter of a million specimens, representing a great number of interesting and mostly new species. Many specimens of mollusks from the western coast of America as far north as Alaska, principally obtained during the expeditions of the steamer *Albatross* and those of Dr. Dall, were cleaned and prepared for incorporation in the study series of dried specimens. About 8,000 catalogue cards were written, representing partly the beginning of a revised catalogue of the reserve collection, and partly a species catalogue of Philippine mollusks.

A monograph of the molluscan fauna of the northwest coast of America, for which Dr. Dall has been gathering specimens and data for 45 years, has now been taken up, the material having accumulated and been arranged to such an extent as to permit of its being systematically studied. Dr. Dall completed a review of the genus *Conus* as represented on the west coast of America and conducted various minor investigations on the land shells of Mexico and Peru. Dr. Paul Bartsch continued his work on the east African collection of Col. Turton, which has been interrupted by other duties but will now soon be finished. He also wrote a few short papers on small west American species. The monograph of the Pyramidellid mollusks of the west coast of America, by Messrs. Dall and Bartsch, the completion of which was announced in the last report, was issued as a bulletin in December, 1909. As an instance of the stimulation such publications afford to research in the line to which they relate, it may be mentioned that, since the distribution of the work, some 25 new species not included in it have been discovered and forwarded to the Museum by west coast collectors.

Dr. T. Wayland Vaughan, of the Geological Survey, the Hon. T. H. Aldrich, of Birmingham, Alabama, and Miss Julia Gardner, of Johns Hopkins University, have had free access to the collections for the prosecution of their paleontological investigations on the Tertiary formations of the eastern United States. Mr. G. D. Hanna, of the Geological Survey, conducted researches on the anatomy of the small land shells of the District of Columbia and of some Philippine marine shells, which were made the subject of a paper. Mr. J. B. Henderson, jr., of Washington, spent much time at the Museum working up the marine mollusks from off the southeastern coast of the United States, where he has made extensive deep sea collections by dredging. Miss M. C. Breen continued her studies of the mollusks of the District of Columbia, spending one or two days each week during the greater part of the year with a view to preparing a thesis for a doctorate degree. Dr. H. A. Pilsbry, Mr. Bryant Walker, Mr. H. W. Clapp, and Mr. F. N. Balch consulted the collections at various times. The demands on the division from correspondents for the identification of specimens have been especially great.

Marine invertebrates.—Among the accessions to the division of marine invertebrates were several important transfers from the Bureau of Fisheries, as follows: Ophiurans, or brittle stars, to the number of over 7,000 specimens, from the cruises of the steamer *Albatross* in Japanese waters in 1900 and 1906, identified by Dr. Hubert Lyman Clark, and constituting part of the material used by him in preparing the monograph of the North Pacific Ophiuroidea now being published by the Museum; 20 species, represented by 235

specimens, of sea urchins, of the family Echinothuridæ, forming the type set of the specimens on which was based the recent monograph by Dr. Alexander Agassiz and Dr. H. L. Clark, published by the Museum of Comparative Zoology; 166 specimens of alcyonarian corals from the *Albatross* explorations in the northwestern Pacific Ocean in 1906, worked up by Prof. C. C. Nutting, of the University of Iowa; 64 lots of parasitic copepod crustaceans from various localities, comprising an important part of the material used by Dr. C. B. Wilson, of Northampton, Massachusetts, in his articles on this group now in course of publication by the Museum; about 200 specimens of isopod crustaceans collected by the steamer *Albatross* in the Philippine Islands in 1907-8 and identified by Dr. Harriet Richardson; a small collection of pycnogonids from the *Albatross* expedition of 1904-5 to the eastern Pacific Ocean, named by Dr. L. J. Cole, of the University of Wisconsin. With the last was a large number of unidentified pycnogonids from various sources.

An especially noteworthy accession, received from Mr. J. Stanley Gardiner, of the Museums, Cambridge, England, consisted of 806 specimens of crustaceans, representing 245 species, which had been collected by H. M. S. *Sealark* in the western Indian Ocean in 1905. The importance of this addition arises from the fact that the region was previously very poorly represented in the Museum, while the collection contains the types of 34 species and 3 new subspecies, together with 3 new genera, besides many other species now obtained for the first time. This is the first set of specimens and was presented in consideration of the services of Miss Rathbun, assistant curator, in working up the entire collection of crustaceans from this exploration.

The Museum d'Histoire Naturelle, Paris, France, through Prof. E. L. Bouvier, contributed 30 specimens representing 23 species of isopod crustaceans, obtained by the exploring vessels *Travailleur* and *Talisman* in the eastern Atlantic and European waters. Ten species of sea-pens, Pennatulidæ, from Japan and the Mediterranean, were received in exchange from the Zoologische Sammlung des Bayerischen Staates, Munich, Bavaria. Mr. Owen Bryant presented the second set of jelly fishes, comprising 16 species, collected during his cruise to Labrador in 1908. Seventy microscopic slides of British hydroid zoophytes and 48 slides of rotifers from different regions were purchased. Through exchange some especially interesting parasitic worms were secured from Dr. Frederick Fülleborn, of Hamburg, Germany, and Prof. A. E. Shipley, of Cambridge University, England. The collection of the Smithsonian African Expedition contained over 400 specimens of crustaceans and worms from British East Africa and Aden, the most important being examples of several fresh-water crabs, Potamonidæ, from the mountains of east Africa.

On account of lack of sufficient space, it has been impossible to accomplish much in the direction of separating and preparing the extensive reserve and unstudied collections, many of which have been stored for a long time in inconvenient places, preparatory to their removal to the new building. The corals not on exhibition have, however, been transferred. The dried sponges, which have been distributed in several places, were segregated on one of the galleries in the main Smithsonian hall, while another gallery was fitted up as a temporary laboratory for work on the extensive collection of crinoids. Through the temporary employment of several persons, more than the customary amount of routine work was accomplished. One such person of the grade of aid made considerable progress in the sorting of miscellaneous material. The others were engaged in recording and cataloguing, a work which, by force of circumstances, has fallen greatly in arrears and should be brought up to date as soon as possible. This was done during the year for the identified specimens of crustaceans, bryozoans, tunicates, and ophiurans.

Through an oversight, the last report failed to make mention of the investigations conducted by the staff of this division during 1908-9, which are therefore incorporated in the following summation for the past year. Miss M. J. Rathbun, assistant curator, completed her studies on the crabs collected in the Gulf of Siam by Dr. Th. Mortensen, of Copenhagen, and in the Indian Ocean by H. M. S. *Sealark* on the Percy Sladen Trust Expedition of 1905 under Mr. J. Stanley Gardiner. The report on the former is in course of publication in the memoirs of the Royal Danish Academy of Sciences, while that on the latter will appear in the Transactions of the Linnean Society of London. Other investigations finished by Miss Rathbun are incorporated in a report on the decapod and stomatopod crustaceans of the coast and fresh waters of Peru, collected by Dr. R. E. Coker and submitted to the Museum by the Peruvian Government for working up, now being printed in the Proceedings of the National Museum; in a paper on a small collection of decapod crustaceans obtained by Mr. Thomas Barbour in the Dutch East Indies, British India, and Japan in 1906-7, to be published in the Bulletin of the Museum of Comparative Zoology; and in an account of the decapod, schizopod, and branchiopod crustaceans contained in the large collection of natural history secured by Mr. Owen Bryant during his Labrador trip of 1909, which will be published in the full report of the cruise. The localities for each species of the collection last mentioned have already been given in a list of the crustaceans of Labrador, which forms an appendix to Dr. Grenfell's recent book, entitled "Labrador."

Mr. Austin H. Clark continued his researches on the crinoids, and has the first part of an extensive monograph of the group nearly

ready for publication. Besides the specimens in this Museum, he has studied the collections of the Copenhagen University Museum, the Australian Museum, the Berlin Museum, and the Indian Museum at Calcutta, including those obtained by the German steamer *Gazelle* and the Royal Indian surveying steamer *Investigator*. Preliminary papers have been published dealing with these various collections, and also with certain points in the distribution, coloration, ecology, and structure of these animals. In connection with these investigations, negotiations have been entered into with the Copenhagen Museum, the Bergen Museum, the Berlin Museum, the Indian Museum, the Australian Museum, and the Liverpool Museum, and with Prof. Döderlein, of Strassburg, and Prof. Koehler, of Lyons, whereby the National Museum will receive about 300 specimens, representing some 50 species, most of which are new to the collection.

Dr. Harriet Richardson continued studies on the isopod crustaceans, describing various new forms from the collections obtained by the United States Fish Commission between 1871 and 1887 on the northeast coast of North America, until recently in the custody of Prof. A. E. Verrill, and working up the specimens secured on the cruises of the steamer *Albatross* to the northwestern Pacific Ocean in 1906 and to Philippine waters in 1907 to 1910. She also described the isopods obtained by Dr. R. E. Coker in connection with fishery investigations conducted for the Peruvian Government, a small collection of terrestrial isopods from Costa Rica, collected by Dr. J. Fid. Tristan, and the specimens from Mr. Owen Bryant's Labrador cruise, and other sources.

Dr. J. A. Cushman, of the Boston Society of Natural History, completed a paper on two families of foraminifera of the North Pacific Ocean, *Astrorhizidæ* and *Lituolidæ*, from the collection of the Museum, which was placed in his hands some time ago for monographing. Dr. N. Annandale, director of the Indian Museum, Calcutta, submitted a fourth paper on fresh-water sponges contained in the National Museum collection. Dr. Hubert Lyman Clark, of the Museum of Comparative Zoology, completed his work on the large collection of ophiurans, or brittle stars, of the North Pacific Ocean, which will appear as a bulletin of the Museum, and also furnished a description of a new species from the West Indies. Dr. W. K. Fisher, of Stanford University, submitted the first part of a monograph of the starfishes of the North Pacific Ocean, descriptive of the Museum collection, which comprises some 6,000 specimens. Dr. Charles B. Wilson, of the State Normal School, Westfield, Massachusetts, presented three more papers on parasitic copepod crustaceans, chiefly *Lernæopodidæ* and *Ergasilidæ*. Dr. J. H. Ashworth, of the University of Edinburgh, reported on the annelids of the family *Arenicolidæ* of North and South America, including an account

of *Arenicola glacialis* Murdoch. Prof. William E. Ritter, of the University of California, spent some time at the Museum in the study of the Atlantic ascidians, in preparation for his monograph of the simple ascidians of the Pacific Ocean. Dr. E. A. Andrews, of Johns Hopkins University, examined the shrimps of the family Eryonidæ, the anatomy of which he is investigating.

Over 315 lots of specimens of marine invertebrates were sent to 11 naturalists for study and examination, besides 1,100 microscopic slides of foraminifera forwarded to Dr. J. A. Cushman. The principal sendings were of Ostracoda and Cladocera, to Mr. R. W. Sharpe, of Brooklyn, New York, who will report upon them to the Museum; of amphipod crustaceans, to Dr. A. S. Pearse, of the University of Michigan; of amphipods of the Connecticut coast, to Dr. B. W. Kunkel, of the Sheffield Scientific School, who requested them for use in a report for the State authorities; and of simple ascidians, to Dr. W. E. Ritter.

With reference to the section of helminthological collections, it is reported that Dr. B. H. Ransom completed a study of all known species of nematode worms, about 50 in number, which are parasitic in the alimentary canal of cattle, sheep, and other ruminants, based chiefly on the material in the Bureau of Animal Industry collection. Several of the species were found to be new. Mr. M. C. Hall, also of the Bureau of Animal Industry, gave some attention to a new species of tapeworm which infests the dog. Mr. Howard Crawley, of the same bureau, described a species of Trypanosome common in American cattle. Investigations by Dr. Charles Wardell Stiles related mainly to the prevention of typhoid fever, and the hookworm and allied diseases. Dr. Joseph Goldberger, of the Hygienic Laboratory, studied a number of flukes, or distomatous worms, from various sources, among which he discovered some new species. A few loans of parasitic worms were made, and some specimens from the collection were used for class demonstration at the Naval Medical School and Georgetown University.

Plants.—The number of plants added to the National Herbarium was 33,477, received in 374 accessions. Especially noteworthy were several thousand specimens from the Smithsonian African Expedition, mainly collected and prepared by or under the direct supervision of Dr. E. A. Mearns. The transfers from the Department of Agriculture amounted to 3,371 specimens, furnished by the Bureau of Plant Industry, the Biological Survey, the Forest Service, and the Bureau of Entomology. Through the medium of exchange over 8,000 specimens were received, the largest contributor in this connection being the Bureau of Science at Manila (to the extent of 5,670 plants), followed by the New York Botanical Garden, the Field Museum of Natural History, and the K. K. Naturhistorisches

Hofmuseum at Vienna. Specimens numbering 3,256, all from North America and mostly from the United States, were purchased.

Fifty steel-covered insect-proof cases, containing 1,200 pigeonholes, were added to the equipment of the herbarium, increasing its complement of cases to 568 and of pigeonholes to 12,668, and for the first time providing suitable accommodations for the entire herbarium. The permanent collection now contains 385,374 specimens. The number of specimens mounted was 51,500, being more than three times as many as in the preceding year and more than twice as many as in any year since 1899 except 1904. Of this number, 48,000 were done by contract. About 30,000 sheets were stamped, recorded, and distributed to their appropriate places, while about 16,000 mosses and liverworts were also distributed or made ready for the herbarium.

Dr. J. N. Rose, associate curator, continued his studies of Mexican and Central American plants, and also his investigations on the Cactaceæ in collaboration with Dr. N. L. Britton, of the New York Botanical Garden. Mr. W. R. Maxon, assistant curator, continued work on North American ferns, and spent one month at the New York Botanical Garden in that connection.

One thousand and thirty-eight plants were lent to botanists, the principal loan consisting of Central American plants to Capt. J. Donnell Smith, of Baltimore. The foregoing figures, however, are exclusive of material borrowed by the botanists of the Department of Agriculture. Among visitors to the Museum who came to examine specimens the following may be mentioned, together with the subject of their inquiry: Dr. Ezra Brainerd, of Middlebury, Vermont, the violets, of which the herbarium contains a very large series; Miss Alice Eastwood, of the California Academy of Sciences, California plants; Mr. W. W. Eggleston, of New York, the genus *Cratægeus*; Prof. J. W. Harshberger, of the University of Pennsylvania; Mr. E. L. Morris, of Brooklyn, New York, the genus *Plantago*; Dr. P. A. Rydberg, of the New York Botanical Garden, plants of northwestern America; Rev. Dr. Julius A. Nieruwland, of the University of Notre Dame, Indiana, Indiana plants; Dr. J. K. Small, of the New York Botanical Garden, plants of North America; Miss Mary Wilkins, of Washington, the subfamily Solanaceæ. Members of the scientific staff of the Department of Agriculture consulted the herbarium frequently.

Explorations.—The most important exploration of the year and the one from which the Museum profited most richly was that known as the Smithsonian African Expedition under the direction of Col. Theodore Roosevelt. This expedition was organized by Col. Roosevelt, through whose invitation the Smithsonian Institution was enabled to take part, with the understanding that by furnishing the naturalists and paying its share of the expenses, the collections

obtained should come into the possession of the National Museum. The funds for the expedition on the part of the Institution were secured entirely from private sources, and the great collections turned over to the Nation as a result of the undertaking, essentially as a donation from a few friends, compose one of the largest and most important single gifts of natural history specimens ever received. As this matter has been fully treated in the report of the Secretary, only a brief account of the expedition need be given here.

Col. Roosevelt was accompanied by his son Kermit. The naturalists designated by the Smithsonian Institution were Lieut. Col. Edgar A. Mearns, surgeon, United States Army (retired), Mr. Edmund Heller, and Mr. John Alden Loring. The itinerary, as reported by the director, was briefly as follows: The party landed at Mombasa, British East Africa, on April 21, 1909, and reached Khartum on March 14, 1910. It was joined at Mombasa by Mr. R. J. Cuninghame, who remained with it throughout the entire trip, and by Mr. Leslie J. Tarlton, who continued with the expedition until it left east Africa, both of these gentlemen working zealously and efficiently for the success of the expedition. Eight months were spent in British East Africa. Collecting was carefully done in various parts of the Athi and Kapiti plains, in the Sotik, and around Lake Naivasha. Dr. Mearns and Mr. Loring made a thorough biological survey of Mount Kenia, while the rest of the party skirted its western base, went to and up the Guaso Nyero, and later visited the Uasin Gisbu region and both sides of the Rift Valley. Mr. Kermit Roosevelt and Mr. Tarlton visited the Leikipia Plateau and Lake Hannington, and Dr. Mearns and Mr. Kermit Roosevelt made separate trips to the coast region near Mombasa. The expedition left east Africa on December 19, 1909, passed through Uganda, and thence down the White Nile. Over three weeks were spent in the Lado north of Wadelai, and, crossing again into the Lado at Gondokoro, Colonel and Kermit Roosevelt remained about 10 days in the neighborhood of Redjaf. On the journey from Gondokoro to Khartum, which was made in a steamer placed at the disposal of the party by the Sirdar, collections were obtained at Lake No and on the Bahr-el-Ghazal and Bahr-el-Zeraf. Col. Roosevelt speaks in the warmest terms of the generous courtesy shown the expedition and the assistance freely rendered, not only by the Sirdar, but by all the British officials in east Africa, Uganda, and the Sudan, and by the Belgian officials in the Lado.

It is impossible in this connection to give a complete inventory of the specimens obtained, as the collections from Uganda and the Sudan were not received until after the close of the fiscal year, and had not been fully unpacked and assorted at the time of writing. In his report, however, Col. Roosevelt gives the following tentative enumera-

tion: Mammals, both large and small, 4,897; birds, about 4,000; reptiles and batrachians, about 2,000; fishes, about 500; making the total number of vertebrates about 11,397. The invertebrates include insects; marine, land, and fresh-water mollusks; crustaceans; and representatives of other groups. Several thousand plants were also collected and a few anthropological objects.

It may be remarked that through this expedition the National Museum has acquired a series of the large and small mammals of east Africa, which, collectively, is probably more valuable than is to be found in any other museum in the world. Its importance lies not so much in the number of new forms as in the fact that it affords an adequate basis for a critical study of the mammal fauna of east Africa and the establishment or rejection of the large number of forms which have been described, especially in recent years, from insufficient material. The collection of birds is also noteworthy; the plants should form the basis of a valuable report; the reptiles and batrachians include large series of individuals of the same species, and will be useful for studies of variation; and other parts of the collection contain groups of specimens and single specimens of much interest.

Mr. Owen Bryant, of Cohasset, Massachusetts, announced, in the winter of 1908-9, his intention of spending a year or more in Java, and offered, in case the Museum would detail a naturalist to accompany him, to turn over to the Museum half of such collections as might be obtained. In accepting this proposition, Mr. William Palmer was assigned to the service and left Washington in January, 1909. Field work was carried on until last spring, and at the close of the year both naturalists were on their way home. The collections, which are elsewhere referred to and are important, were mainly obtained at the western end of Java, about Buitenzorg and on Mount Gede and other mountains. The series of mammals and birds, which are the most extensive, are of great interest for comparison with east Indian and Philippine specimens contributed by Dr. W. L. Abbott and Dr. E. A. Mearns.

The only considerable biological expedition sent out by the Museum itself was a botanical one under Dr. J. N. Rose, who was accompanied by Mr. P. C. Standley and Mr. P. G. Russell. This party was absent 10 weeks, during which it visited western Texas, southern New Mexico, southeastern Arizona and western Mexico, and made a very important collection of plants, comprising about 10,000 specimens, including representatives of many undescribed species. The head curator, Dr. True, spent a few weeks in collecting vertebrate remains from the shell heaps in the vicinity of Penobscot Bay, Maine, and secured material which, taken in connection with that obtained

in previous years, seems to indicate that the original mammal fauna of the region differed somewhat from the present one. Mr. A. C. Weed, aid in the division of fishes, made a collecting trip to Sodus Bay, New York, as explained elsewhere.

Preparation of specimens.—There has been necessity for some changes in the shops used for the preparation of specimens of zoology, due partly to the abandonment of the rented quarters south of the Mall, and partly to the greatly increased amount of work to be provided for in building up the exhibition collections under the new conditions. This was accomplished by assigning to osteology an additional room in the shed south of the Smithsonian building, and temporarily to taxidermy a part of the southeast range in the older Museum building, which has been suitably inclosed.

One of the principal problems of the year was the preservation of the many large skins from the African expedition, which were received in pickle but could not safely be allowed to remain long in that medium. It was therefore decided to tan them, and, as the Museum has no facilities for that kind of work, it was arranged to have it done by contract. The results have so far been very satisfactory.

The work of the preparators is under the direct charge of the chief of exhibits, Dr. James E. Benedict. With the changes inaugurated during the year, the chief taxidermist, Mr. G. B. Turner, was relieved of the miscellaneous work which has hitherto occupied much of his attention, and he and his immediate assistants are now giving practically all of their time to mounting for exhibition. Only one specimen from the African expedition, a cheetah, was completed for this purpose, but a model in clay for a group of lions from the same collection was prepared. Among mammals from other sources mounted were a takin or Chinese antelope, an African bush pig, a black leopard, and a number of small Old World mammals needed to fill gaps in the faunal series. The time of the bird taxidermist, Mr. N. R. Wood, was fully taken up in the mounting and remounting of bird skins for exhibition and the preparation of skins for the study series. In osteology a large amount of work was also accomplished, including the cleaning of skeletons and skulls, and the mounting of some skeletons for exhibition.

The exhibition collections.—Included in the moving from the older buildings were the exhibition collections of mollusks, insects, fishes, reptiles and batrachians, and Old World mammals, but as none of the new halls could be fitted up in time, these exhibits were still inaccessible to the public at the close of the year. The exhibits remaining in the old quarters consisted of the birds and marine invertebrates in the Smithsonian building, and the American mammals and osteological specimens in the Museum building. The

transfer of the mollusk cases from the middle of the bird hall has greatly relieved the congestion there, and made it possible to so arrange the cases containing bird groups as to much improve the appearance and condition of the hall.

The space allotted for the exhibition collections of biology in the new building comprises most of the western side of the building, including the main and second stories of the western wing and range and the second story of the northwest range. A complete provisional arrangement of the various exhibits, even to the individual cases, has been worked out, but it is subject to more or less change. Its immediate importance is as a basis for the construction of furniture. To temporarily meet the needs of installation, however, many old cases were taken from storage, and are being repaired as far as necessary. The mounted mammals which had been in storage were critically examined, and the fish, reptile, and batrachian molds and casts were being treated in the same way when the year closed.

Distribution and exchanges.—Specimens were distributed for educational purposes or to be added to museum collections as follows: Mammals to the Wisconsin School for the Deaf, and to the Museum of the City of Portland, Oregon; birds to the Normal School, Washington, District of Columbia; fishes from the *Albatross* explorations in the southern and eastern Pacific Ocean, to the Museum of Comparative Zoology, Cambridge, Massachusetts, and fishes and marine invertebrates to Muhlenberg College; insects to the British Museum, the American Museum of Natural History, the Museum of the Brooklyn Institute of Arts and Sciences, and the University of Utah; mollusks to the Crane Technical High School, Chicago; marine invertebrates of other groups to the Philadelphia Academy of Natural Sciences, the University of Iowa, Yale University Museum, and Leland Stanford Junior University; and samples of ocean bottom to the University of California.

The number of specimens used in making exchanges was small, the largest sendings having been of insects to the extent of 1,281 specimens, and of plants to the extent of 6,214 specimens. The principal recipients of the latter were the New York Botanical Garden, the Missouri Botanical Garden, and the University of California. The number of specimens of plants received by the Museum on account of exchanges was 8,049.

Specialists not connected with the Museum obtained for study and comparison about 10,800 specimens of animals and plants, exclusive of marine invertebrates. A part of these transactions were initiated by the Museum, in accordance with a long established policy, in order to facilitate and hasten the classification of the collections, while in

other cases the material was requested as loans to aid in researches which had been started elsewhere. In essentially all cases the work is carried on gratuitously, the compensation, if any, consisting in the gift of a set of duplicate specimens. When the investigations are being conducted directly for publication by the Museum, the cost of illustrations may be allowed.

DEPARTMENT OF GEOLOGY.

Accessions.—This department received about 18,000 specimens, the accessions being distributed among the several divisions as follows: Systematic and applied geology, 63; mineralogy, 26; invertebrate paleontology, 33; vertebrate paleontology, 26; paleobotany, 9. Among the additions in systematic and applied geology may first be mentioned a series of volcanic glasses from the island of Billiton and from Australia, included under the names of billitonite, obsidianite, and obsidian bombs, which are at present exciting considerable interest on account of their supposed though unproven meteoric nature. A small complete meteorite from McDuffie County, Georgia, and fragmental portions of others from Hvittis, Finland; Lampa, Chile, and Shrewsbury, Pennsylvania, were purchased. Sixty-one rock specimens were obtained in exchange from the museum at Colombo, Ceylon. The following were presented: Two large specimens of magnesite from Porterville, California, by the Tulare Mining Company; 62 specimens of rocks and ores from the mines at Mount Lyell, Tasmania, by the Mount Lyell Mining and Railway Company; a small series of drift rocks from the antarctic region, by Sir Ernest Henry Shackleton; and a small but very interesting series of obsidians from Iceland, by Dr. F. E. Wright.

The most noteworthy acquisition by the division of mineralogy was a large series of type specimens of mercury minerals from Terlingua, Texas, which had formed the basis of important chemical and crystallographic investigations by Messrs. Hillebrand and Schaller, deposited by the United States Geological Survey. Among specimens purchased were fine examples of calamine, mimetite, calcite, niccolite, sphalerite, crystallized carnotite, bloomstrandite, and alamosite. The Dallas Mining Company, of Coalinga, California, donated a fine showy specimen of the new gem stone, benitoite, associated with neptunite; and the Rhodesia Museum, Bulawayo, South Africa, sent in exchange two specimens of the rare minerals tarbuttite and hopeite from the Broken Hill mines. Mr. F. P. Graves, of Doe Run, Missouri, presented some fine amethystine calcite twins from that locality, and Dr. Aleš Hrdlička, of the Museum staff, secured an interesting series of sand barite crystals at Kharga, Egypt, during an anthropological trip to the Libyan Desert in 1909.

The principal accessions in the division of invertebrate paleontology consisted of collections made by or under the direction of Dr. Charles D. Walcott, Secretary of the Smithsonian Institution, and by members of the staff of the division. Of Cambrian fossils, extensive collections were obtained by Dr. Walcott at various localities in Alberta, Canada, during the summer of 1909, and later in Lawrence County, Pennsylvania; in northeastern Utah by Mr. J. M. Jessup, in the same general region by Mr. Eliot Blackwelder, and in Manchuria, China, by Dr. J. P. Iddings, who secured over 6,000 specimens. All of this field work, except that by Mr. Blackwelder, was conducted under the auspices of the Institution, in the interest of the important investigations of this early geologic fauna, which has occupied the attention of Dr. Walcott for many years. Of Ordovician and Silurian fossils about 3,000 specimens were collected in the Ohio Valley by the curator, Dr. R. S. Bassler, and an important series in northeastern Utah, by Mr. J. M. Jessup. Eocene fossils from Wilmington, North Carolina, to the number of over 2,000, were received as a gift from Prof. B. L. Miller, of Lehigh University. Other donations of which mention should be made comprised Tertiary fossils from the Olympic peninsula of Washington, from Mr. Albert B. Reagan, of La Push, Washington; and Ordovician and Silurian fossils from the island of Anticosti, Canada, from the Yale University Museum.

Among the additions in the division of vertebrate paleontology were a skull and lower jaw associated with other parts of the skeleton of a Cretaceous crocodile, *Leidyosuchus*, from Kansas; a complete skull and neck of *Clidastes velox*, from the same place; and a complete skeleton of a small rhynchocephalian reptile, *Homoiosaurus maximilii*, from Germany. Mr. J. W. Gidley, of the division, under the auspices of the United States Geological Survey, collected some important mammalian remains in the Fort Union formation, near Fish Creek, Sweet Grass County, Montana. These specimens are of rare scientific value and, together with previous accessions from the same formation and locality, make the Museum collection the best known of Fort Union mammals in the world. A collection of turtle remains from the Cretaceous of New Mexico, obtained by Mr. Gidley and Mr. J. H. Gardner, also for the Geological Survey, comprise the type specimens of eight new species.

The division of paleobotany received from the Geological Survey the types and figured specimens of fossil plants described by Mr. Arthur Hollick in Monograph 50 of the Survey, entitled "The Cretaceous Flora of Southern New York and New England." Mention should also be made of a large number of undescribed fossil plants from Spitzbergen, presented by Mr. John M. Longyear, of Brookline, Massachusetts, and of about 350 fossil plants from the Laramie and

Fort Union formations of Wyoming and Colorado, collected by Dr. A. C. Peale.

General work on the collections.—Routine work on the collections was subordinated to the transfer of the department to the new building, which was carried on as rapidly as the necessary cases could be supplied. The material previously contained in the rented buildings south of the Mall, consisting mainly of unassorted and unidentified specimens, had been moved the year before and temporarily stored on the floors and in rough shelters erected in the east court. The work of overhauling, labeling, and cataloguing these and other unstudied collections was taken up, and while good progress was made, considerable time will still be required to complete this large task.

By the end of the year all of the laboratories and shops, as well as the office of the head curator, had been removed to the new building, and also the following collections: The reserve and geographic exhibition series in applied geology; the exhibition series in systematic geology; the entire collection of meteorites; the reserve and duplicate series of minerals; the reserve and duplicate series in invertebrate and vertebrate paleontology, except the Cambrian material on which the Secretary is at work and which remains mostly in the Smithsonian building; and a part of the reserve and duplicate series in paleobotany. The fitting up of laboratories and the storage of material in the new quarters were in various stages of adjustment, in some directions approaching completion, but it was impossible to finish any part of the new installation of exhibition collections, though this work is rapidly progressing.

General work in the division of systematic and applied geology has consisted almost wholly of the preparation of exhibition material, the separation of duplicates and the copying of about 18,000 catalogue cards on the standard size of card recently adopted. Early in the year a thorough overhauling of the mineral and gem collections was begun, the classification used by Dana in his *System of Mineralogy* being adopted for their rearrangement. This work involves the numbering of a large quantity of specimens, the revision and amplification of many labels, and the preparation of a new card catalogue. Advantage is also being taken of the opportunity to separate the duplicates from such material as is considered appropriate to retain in the reserve series which, together with the exhibition series, has, so far as the work has gone, been placed in exceptionally good condition for study and reference. The mineralogical laboratory in the new building is being furnished in a manner to provide for the more convenient and detailed study of material than has been possible heretofore.

In the division of vertebrate paleontology excellent progress was made in the preparation of material for both exhibition and study. Over 250 separate bones of *Stegosaurus* remains were worked out. A skeleton of *Ceratosaurus nasicornis* was made ready for final mounting, while the mount of a *Basilosaurus* was nearing completion. A beginning was also made in the preparation of skeletons of *Camptosaurus browni* and *C. nanus*. These will all form valuable additions to the exhibition series, the zeuglodon (*Basilosaurus*) being the first of its kind to be mounted in any museum of the world, its nearest approach being the grotesque *Hydrachus* prepared and exhibited by Koch in Germany in 1847.

The collections in the division of invertebrate paleontology are now well systematized. A large number of boxes of unstudied material which had been in storage were unpacked and made ready for examination, and some additions and improvements were made in the biologic series. The additions to the Cambrian collection were, under the supervision of the Secretary of the Institution, prepared for study, being numbered, labeled, and catalogued as the work progressed.

The number of lots of specimens received from correspondents for identification and reported on by letter was 433, distributed among the different divisions of the department as follows: Systematic and applied geology, 282; mineralogy, 103; fossil invertebrates, 20; fossil vertebrates, 25; fossil plants, 3.

Exhibition collections.—As above stated, circumstances did not warrant making any appreciable additions to the exhibition collections installed in the public halls, and in fact the transfer of several of the collections to the new building caused them to be temporarily withdrawn from view. The following exhibitions, however, still remained open to the public in the old building at the close of the year, namely: Stratigraphic geology, minerals and gems, building stones, metallic and nonmetallic minerals in applied geology, invertebrate paleontology and paleobotany.

Researches.—In view of the circumstances already explained, comparatively little research work was done. The number of publications by members of the staff of the department amounted to 31. A new meteorite was described by the head curator, Dr. George P. Merrill. Dr. F. B. Laney, assistant curator in geology, began an investigation of the copper ores, with the object of establishing the primary or secondary origin and order of crystallization of the various minerals constituting both the ore and gangue, the method adopted being that of studying polished surfaces under the microscope and by reflected light. Some interesting results were accomplished, but the work was cut short by the resignation of Dr. Laney to accept

employment on the Geological Survey. Dr. J. E. Pogue, assistant curator of mineralogy, completed four studies on Museum material, and devoted some time to the examination of calamine crystals from Mexico, phlogopite-biotite intergrowths from Ottawa, Canada, and certain unusual pseudomorphs of marcasite after pyrrhotite from Osnabruck, Prussia. An account of the turquoise was also begun, and some work was done on the optical and crystallographic characters of carnotite and certain vanadium minerals from Peru.

Dr. Ray S. Bassler, curator of invertebrate paleontology, finished a work which had extended over a period of four or five years on the stratigraphy of the Ordovician rocks of Russia, with a description of their bryozoan fauna. He spent two weeks in the Ohio Valley in examining the Ordovician and Silurian rocks; and the month of June, 1910, in a survey of the Silurian and Mississippian rocks in Kentucky and Tennessee for the purpose of securing certain geologic data needed by the Hon. Frank Springer for the completion of his work on the Crinoidea Flexibilia. Reference has already been made to the collections obtained from these expeditions. The assistant curator, Mr. L. D. Burling, began the study of some Ordovician brachiopods in the collection of the Museum of Comparative Zoology at Cambridge; completed his work in connection with the Secretary's monograph of Cambrian brachiopoda, and continued that on the Ordovician fauna of Colorado and Wyoming. He has also prepared a catalogue of all the Cambrian brachiopoda in the Museum, giving complete data for each figured specimen. Dr. William H. Dall, associate curator, has been engaged in research work on the fossils of the Oligocene silex beds of Tampa, Florida, and has nearly completed a study of the fossils of the Lake beds of Meteor Crater, Arizona.

In the division of vertebrate paleontology, Mr. J. W. Gidley, custodian of mammalian remains, continued his studies of the Fort Union fossil mammals, of the skeleton of *Basilosaurus* (*Zeuglodon*) now in process of mounting, and of Oligocene and Miocene rodents. Mr. C. W. Gilmore, custodian of reptilian remains, completed papers on a new rhynchocephalian reptile from the Jurassic of Wyoming and a new crocodile from the Cretaceous of Kansas. He also devoted considerable time to a study of the fossil reptiles of the southern coastal plain.

DISTRIBUTION AND EXCHANGE OF SPECIMENS.

The distribution of regular sets of duplicate specimens during the past year was confined almost entirely to invertebrate fossils, of which 61 sets, containing 3,214 specimens, were sent out. In addition, 2,732 specimens, of which 1,962 were biological, 752 geological, and 18 anthropological, were selected from the duplicates to meet special applications. To specialists not officially connected with the Museum

there were lent for study 15,715 specimens from the department of biology, 1,241 from the department of geology, and 120 from the department of anthropology. Exchanges with scientific institutions and with individuals were conducted as usual, and for this purpose 24,361 specimens were used, 9,534 being biological, 14,713 geological, and 114 anthropological.

Following are the institutions abroad with which exchanges were made during the year: The British Museum of Natural History, London, and the Royal Botanic Gardens, Kew, England; the Königl. Botanischer Garten und Museum, Dahlem, Steglitz bei Berlin, and the Zoologische Sammlung des Bayerischen Staates, Munich, Germany; the Jardin Botanique de l'État, and the Musée Royal d'Histoire Naturelle de Belgique, Brussels, Belgium; the Botanisk Museum and the Zoologisches Museum, Copenhagen, Denmark; the Musée d'Anthropologie et d'Ethnographie de Pierre le Grand, St. Petersburg, Russia; the Naturhistoriska Riksmuseum, Stockholm, Sweden; the K. K. Naturhistorisches Hofmuseum, Vienna, Austria; the Československé Národopisné Museum (Musée Ethnographique Tchèque-Slave), Prague, Bohemia; the Colombo Museum, Colombo, Ceylon; the Rhodesia Museum, Bulawayo, Rhodesia, British South Africa; the Western Australian Museum and Art Gallery, Perth, Western Australia; the Museo Ethnografico, Universidad Nacional de Buenos Aires, Buenos Aires, Argentina; the Department of Agriculture, Hope Gardens, Kingston, Jamaica, British West Indies, and the Geological Survey of Canada.

Exchanges were also made with the following individuals abroad: Mr. Arthur C. Banfield, and Mr. W. G. Rutherford, London, England; Dr. Emile G. Racovitza, Sorbonne, Paris, Monsieur M. P. Thiéry, Chaumont, Haute-Marne, France; Dr. Enslin, Fürth i. B., Mr. A. Kneucker, Karlsruhe, Prof. Gustav Schwalbe, Strassburg, Alsace, Prof. David Paul von Hansemann, Berlin, Germany; Prof. J. Matiegka, Prague, Bohemia; Dr. Einar Lönnberg, Stockholm, Sweden; Dr. K. Martin, Leiden, Holland; Dr. C. Christ and Dr. Jean Roux, Basel, Charles Mottaz, Geneva, Switzerland; Dr. F. Werner and Mr. I. V. Zelizko, Vienna, Austria; Señor Federico Eichlam, Guatemala, Guatemala.

NATIONAL GALLERY OF ART.

At the beginning of the fiscal year the William T. Evans collection of American paintings which, through the courtesy of the trustees of the Corcoran Gallery of Art, had been accommodated in the atrium of that Gallery since the initial gift of 50 pictures in 1907, was brought to the older Museum building. It was there installed in the provisional picture gallery at the left of the main entrance, and so fully occupied its walls and screens as to necessitate the removal

to other temporary quarters of nearly all of the paintings which had previously been displayed in this hall. The Evans collection at that time numbered 84 canvases.

The growth of the National Gallery has been so marked that no quarters suitable for its installation, either in size or character of room or manner of lighting, are to be found in the older buildings. While the new building was planned and erected for the natural history collections, and none of its space can well be spared for other purposes, it contains three sky-lighted halls, one of which it has been decided to allot provisionally to the needs of the paintings, rather than keep them scattered, in large part inaccessible to the public, and thus jeopardize the art interests of the Government now being so greatly stimulated through the acts of generous-minded citizens.

The place selected for the Gallery in the new building is the entire central part of the middle hall on the main floor directly below the skylight well and included between the two rows of nine large rectangular piers serving as supports for the second floor. These piers are spaced $18\frac{1}{2}$ feet apart from center to center. In the arrangements effected during the year the southernmost section of $18\frac{1}{2}$ feet was not utilized, but having been added at the beginning of the new year, the entire construction for the Gallery as it now stands may be described in this connection. It consists of simple screen walls adapted to the hanging of pictures, having a uniform construction and height throughout. There is primarily a general inclosing wall of this character built against the inner faces of the piers, and including a floor space 146 feet long by 48 feet wide, which is the total extent of the Gallery. The area so surrounded is then divided into eight rooms, symmetrically disposed, besides three short sections of corridor running with the longitudinal axis of the hall. The largest of the rooms is midway of the inclosure and occupies its entire width, measuring 48 by 36 feet. Immediately adjoining it both to the north and south is a pair of rooms, the rooms in each pair being separated by a 12-foot corridor. These four rooms are of equal size and 36 feet long by 18 feet wide. The southern end of the inclosure consists of a single room, 48 by 18 feet; and the northern, of two small rooms, each $17\frac{1}{2}$ by $14\frac{1}{2}$ feet, separated by a corridor 18 feet wide. The general inclosure is entered from the north and south only, and each of the rooms, except the two smallest ones, has two doorways, all of which are sufficiently large to permit the free circulation of visitors. There are no doors, however, and the protection of the Gallery is provided for in the measures adopted for safeguarding the hall as a whole. The corridors as well as the compartments are arranged and used for the installation of paintings.

The screen walls are built with a core of macite blocks strengthened by iron bars and covered with wood as the only convenient medium

for the attachment of pictures. Measuring only 13 feet 11 inches high, an open interspace of 3 feet occurs between the top of the general inclosing walls and the under surface of the ceiling girders which span the piers. All inside wall surfaces have a 6-inch base of pink Tennessee marble, surmounted by a wood base of the same height, and followed by a molded wainscot rail 3 feet above the floor. All interior compartments, except the south room and the corridors, are also provided with a 2½-inch round handrail of oak at the same height as the wainscot rail, supported on ornamental cast-iron brackets. This rail is generally about 2 feet from the wall, but in some places the distance is reduced to 1 foot 4 inches to avoid obstructing openings. With the exception of the handrail, all exposed woodwork, including the doorway trims and the molding along the tops of the screens, is of cypress.

The surface for the hanging of pictures measures 10½ feet high from the wainscot rail to the top molding, and has a total linear extent, excluding openings, of about 950 feet. It is covered with burlap, as is also the space between the baseboard and the wainscot rail, the color of this material being a dark green in the rooms and a light brown in the corridors.

The exterior surfaces of the inclosing walls, used for ethnological subjects, are provided with marble and wood bases of the same character as those in the interior, but they lack the wainscot and handrails. The burlap covering is of the light-brown color used in the corridors.

The construction of the Gallery screens was finished in February, 1910, and the hanging of the paintings about the middle of March. The installation, directed by the curator of the Gallery, Mr. William H. Holmes, proved most effective and resulted in a harmony of arrangement which elicited the warmest praise. It should also be stated that, upon the completion of this task, the lighting conditions, though designed for another purpose, were found to be exceptionally good.

In these new quarters the Gallery was informally opened to the public from noon until 5 o'clock on the afternoon of March 17, 1910. Admission was by card, partly to prevent undue crowding and partly to bring the event specially to the attention of Congress, the official body in Washington, and all other persons known to be interested in the promotion of art at the Nation's Capital. The attendance reached about 1,600, and the appreciation manifested was extremely gratifying. The space prepared for the occasion, including also the surrounding parts of the main hall and the adjacent ranges, which contained some of the best of the ethnological groups and historical exhibits, provided ample room for the circulation and comfort of the guests. Since that time the Gallery has continued open. The num-

ber of paintings exhibited was 159, of which 131 were the property of the Gallery, the remainder being loans. There were also a few pieces of sculpture belonging to the Harriet Lane Johnston collection. The Evans collection occupied four rooms and a large amount of corridor space; the Harriet Lane Johnston collection, one room; a loan by Mr. Ralph Cross Johnson, one room; and the other Gallery possessions and loans, the remaining room and corridor walls and also the northern outer surface of the general inclosure. The large decorative painting by Mr. John Elliott, entitled "Diana of the Tides," elsewhere described, was likewise included in the exhibition. A catalogue of the collection was printed for gratuitous distribution.

Again, on the afternoon of May 17, 1910, the Gallery was specially opened from 4.30 to 6 o'clock for the benefit of the members of the American Federation of Arts, which was then holding its first annual convention in Washington, and on the same day the Secretary of the Institution addressed the Federation on the subject of the National Gallery.

A Museum bulletin of 140 pages issued during the year treats in a historical way of the collections of art of all kinds acquired by the museums under Government control from the founding of the National Institute in 1840, and concludes with an illustrated catalogue of the paintings in the National Gallery on July 1, 1909. According to this publication, the National Gallery had, during the preceding three years, been the recipient of three important collections of paintings, one bequeathed by Harriet Lane Johnston, the others presented by Mr. Charles L. Freer, of Detroit, and Mr. William T. Evans, of New York. It was also in possession of a number of paintings derived from other sources, and had been fortunate in securing several interesting loans. The bulletin likewise records many additional paintings, mainly portraits, and other objects of art, associated with the historical collections of the Museum or belonging to the Smithsonian Institution.

The collection of Harriet Lane Johnston, who died on July 3, 1903, came into the possession of the Gallery under a decree of the Supreme Court of the District of Columbia, dated July 11, 1906, which interpreted that part of Mrs. Johnston's will relating to the collection favorably to the contention of the Government, based upon the act of Congress of 1846 founding the Smithsonian Institution. Received and placed on exhibition in August, it contains the following paintings: "Madonna and Child," by Bernardino Luini; "Portrait of Mrs. Hammond," by Sir Joshua Reynolds; "Portrait of Miss Kirkpatrick," by George Romney; "Portrait of Lady Essex as Juliet," by Sir Thomas Lawrence; "Portrait of Mrs. Abington," by John Hoppner; "Portrait of Miss Murray," by Sir William Beechey; "Portrait of the Prince of Wales (King Edward VII)," by Sir John Watson Gor-

don; "The Valley Farm," by John Constable; "Madonna and Child," after the manner of Correggio; "Portrait of Madame Tulp," by Cornelis-Janson van Ceulen (Jansen); "Portrait of Josepha Boegart," by Francis Pourbus, the Younger; "Independence," by Klaus Meyer; "A Street Scene in the East," by Edwin Lord Weeks; "The Prince of Wales and President Buchanan at the Tomb of Washington, Mount Vernon, 1860," by Thomas P. Rossiter; "Portrait of President Buchanan," by Jacob Eicholtz; "Miniature of President Buchanan," by John Henry Brown; and "Portrait of James Buchanan Johnston," by Harper Pennington. The collection also includes several articles of historical interest and three pieces of sculpture, namely, a bust of President Buchanan by Henry Dexter, and a bust of Henry Elliot Johnston and a full length of Henry Elliot Johnston, jr., at the age of 2 years, by William Henry Rinehart. A marble bust of Mrs. Harriet Lane Johnston, by Rinehart, was added as a loan during the past year by Miss May S. Kennedy, of Charlestown, West Virginia.

The gift of Mr. Charles L. Freer was accepted by the Board of Regents of the Institution on January 24, 1906. Its general character and the principal conditions under which it was tendered were stated by Mr. Freer in an early communication, as follows:

"These several collections include specimens of very widely separated periods of artistic development, beginning before the birth of Christ and ending to-day. No attempt has been made to secure specimens from unsympathetic sources, my collecting having been confined to American and Asiatic schools. My great desire has been to unite modern work with masterpieces of certain periods of high civilization harmonious in spiritual and physical suggestion, having the power to broaden esthetic culture and the grace to elevate the human mind.

"These collections I desire to retain during my life for the enjoyment of students, my friends, and myself, and for the further purpose of making additions and improvements from time to time. Believing that good models only should be used in artistic instruction, I wish to continue my censorship, aided by the best expert advice, and remove every undesirable article and add in the future whatever I can obtain of like harmonious standard quality."

On May 5, 1906, Mr. Freer transferred to the ownership of the Institution all of the objects then assembled for the collection, the conveyance being made by a deed of gift, accompanied by a descriptive inventory. In the same connection provision was made for the erection, at the proper time and at the cost of the donor, of a suitable and worthy building to house the collection, which is to be adjacent to the National Museum. During subsequent years Mr. Freer has added very extensively to the original gift, mainly as the result of

several visits to Europe and the Orient. These additions have been the subject of three supplemental transfers, the last of which was executed on July 22, 1910. The following summary of the composition of the collection at the close of last year conveys only a suggestion of its richness:

American art is represented by the works of 6 painters, as follows: Thomas Wilmer Dewing, by 21 oil paintings, 8 pastels, and 1 silver point; Abbott Henderson Thayer, by 10 oil paintings and 1 water color; Dwight William Tryon, by 26 oil paintings, 2 water colors and 12 pastels; Childe Hassam, by 1 oil painting; J. Gari Melchers, by 1 oil painting, a portrait of President Roosevelt; and James Abbott McNeill Whistler, by 58 oil paintings, 43 water colors, 32 pastels, 110 drawings and sketches, 3 wood engravings made after his designs, 402 etchings and dry points (over 600 impressions), 166 lithographs (190 impressions), 37 original copper plates, including the Thames set, and the entire woodwork and decoration of the famous Peacock Room from the London residence of the late F. R. Leyland.

The oriental part of the collection consists of choice and rare examples of paintings, pottery, and other kinds of objects, assembled at much pains and with careful discrimination. The period covered extends back some twenty centuries, and the number of oriental masters represented is exceptionally great. The paintings are entirely Japanese and Chinese, and comprise 146 screens, 71 panels, 338 Kakemono, 67 Makimono or scroll paintings, 15 albums of paintings, and 13 Tibetan paintings. The pottery numbers 1,506 pieces, of which 706 are Japanese, 214 Korean, 189 Chinese, 86 Persian, 128 Rakka, and 82 Egyptian, the remainder coming from other parts of central and western Asia. The miscellaneous objects, of which there are 187, include figures, statuettes, sculpture, mirrors, boxes, etc., in bronze, stone, wood, and lacquer, and a number of Byzantine gold ornaments and medallions. There is also a collection of over 600 specimens of ancient Egyptian glass, consisting of bottles, vases, and miscellaneous shapes.

During the year Mr. William T. Evans added 30 examples to his notable collection, which now numbers 114 pieces and represents 80 modern American artists, the most of whom are still living. The collection consists wholly of paintings in oil, with the exception of a fire etching on wood, by Mr. J. William Fosdick. Three paintings belonging in the original gift were replaced by other examples by the same artists. A complete list of the collection is given at the end of this section.

For the most noteworthy loan of the year the Gallery is indebted to the kindness of Mr. Ralph Cross Johnson, of Washington. Received in time for exhibition on the opening day, it entirely occupies one of

the smaller rooms, and comprises the following 9 paintings of exceptional merit: "Italian Landscape," by Richard Wilson; "Portrait of Archibald Skirving," by Sir Henry Raeburn; "Portrait of Sir Sampson Wright," by George Romney; "Marine," by William Clarkson Stanfield; "Madonna and Child," by Govaert Flinck; "A Man's Portrait," by N. Maes; "A View in Rome," by Francesco Guardi; "Portrait of Mrs. Price," by William Hogarth; and "Outskirts of a Wood," by David Cox.

Especially interesting is a series of 15 paintings by early American artists, deposited in the spring of 1910, by Dr. George Reuling, of Baltimore. The pieces are as follows: "Launching of the Brigantine," by P. F. Rothermel; "Battle of Bunker Hill," "General Washington at Trenton," and "Portrait of General Washington," by John Trumbull; "General Washington at Princeton," and "Portrait of General Andrew Jackson," by Charles Willson Peale; "Portrait of Mrs. Lloyd," by Gilbert Stuart; "Henry Clay on his estate, Ashland," by G. P. A. Healy; "Portrait of Miss Rieman," by Gilbert Stuart Newton; "Henry Clay making his Great Speech," and "Portrait of Sergeant Wallace," by John Neagle; "Portrait of William Clark, the Explorer," by Jarvis; "Portrait of Henry Clay," "Portrait of General Zebulon Montgomery Pike," and "Portrait of a Lady," by Rembrandt Peale. The loan also includes a painting by Sir Henry Raeburn, entitled "English Country Squire."

A valuable collection lent by the Duchess de Arcos and turned over to the Gallery in June, 1910, comprises 18 paintings, and a marble Bacchante by Bien Aimé. Among the painters represented are Van Dyck, John Opie, Albano, Zuccarelli, Pietro de Cortona, Perino del Vaga, Baroccio, and Berchem. As the paintings have been in storage for some years, they will require cleaning and some repair before they can be installed.

A portrait of the late Prof. Simon Newcomb, by C. H. L. MacDonald, was deposited by Mrs. Newcomb, and one of Miss Viola W. Myer, by Carle J. Blenner, was lent by Miss Myer.

Reference has been made in a previous report to a large painting designed as a mural decoration for the great east hall of the new building, executed by Mr. John Elliott, as a gift to the Museum from Mr. and Mrs. Larz Anderson, of Boston and Washington. It is entitled "Diana of the Tides," and was painted in the studio of the artist in Rome, Italy, during the years 1906-1908. This canvas, which measures 25 by 11 feet, was first unpacked, framed, and installed for exhibition at the opening of the Gallery on March 17, 1910, being given a position on the southern wall of the middle hall, outside of the Gallery inclosure, where it attracted much attention and was the subject of much praise. Before the close of the year, however, it was removed to its place in the east hall, where it occupies a high

position, its lower margin being about 25 feet above the floor. The label attached to the painting describes the motive as follows:

"The varied attributes of the Moon Goddess of the Romans did not include that of ruler of the tides, since the connection of the moon with tidal movements was unknown before the time of Newton; and Mr. Elliott was the first to recognize the just claims of the goddess to this splendid heritage. In the painting Diana stands erect in her chariot, a rainbow-tinted sea-shell drawn by four white horses. The horses typify the flow of the tides, their action repeating and amplifying the rhythm of the breaking waves. The moon behind the goddess in the east rises through the purple shadows that follow the setting of the sun in the west."

Among other paintings belonging to the Gallery which are mentioned in the art bulletin and are exhibited in the new quarters are F. E. Church's "Aurora Borealis," presented by Miss Eleanor Blodgett; Adrien Moreau's "Crossing the Ferry," the gift of Mrs. James Lowndes; G. P. A. Healy's portraits of Guizot, President John Tyler, and Senator William C. Preston; Lucien W. Powell's "Grand Canyon of the Yellowstone," contributed by the Hon. J. B. Henderson; Max Weyl's "Indian Summer Day," presented by 30 of his friends; and José de Ribera's "Job and His Comforters."

Of the 21 paintings from the Lucius Tuckerman collection lent to the Gallery in 1907, five still remain on deposit through the courtesy of the owners. One of these, belonging to Miss Emily Tuckerman, is by Eduardo Zamaçois and entitled "Refectory." The other four, the property of Mrs. James Lowndes, are as follows: "Boys and Flowers," by Mario da' Fiori; "Fishing for Eels," by Pierre Marie Beyle; "Still Life," by Blaise Alexandre Desgoffe; "Preparing for the Masquerade," by Jehan Georges Vibert. Other loans consist of the 13 marine paintings composing the Edward Moran historical collection, received through Mr. Theodore Sutro; "Judith with the Head of Holofernes," by Francesco di Rosa, lent by Mrs. Elizabeth Walbridge; and a portrait of Andrew Jackson, by an unknown artist, deposited by the Navy Department.

Although placed on exhibition with the collection of history, it is interesting to note in this connection the gift to the Museum of the beautiful model for the Commodore Barry monument in Washington, designed by Mr. Andrew O'Connor. The donor was Mr. Jeremiah O'Connor, of Washington.

The painting by Mr. William Sergeant Kendall, entitled "An Interlude," was included in an exhibition of that artist's work in Boston during the latter half of January and the first of February, 1910; "Spring, Navesink Highlands," by Childe Hassam, was lent to the Carnegie Institute, Pittsburg, for its spring exhibition of 1910; and the "Visit of Nicodemus to Christ," by John La Farge, was

contained in the American Art Exhibition, organized by Mr. Hugo Reisinger, of New York, and held at the Royal Academy of Arts, Berlin, and the Royal Art Society, Munich, during March and April, 1910. These paintings all belong in the Evans collection.

LIST OF THE PAINTINGS BY CONTEMPORARY AMERICAN ARTISTS PRESENTED TO THE NATIONAL GALLERY OF ART BY MR. WILLIAM T. EVANS.¹

JOHN WHITE ALEXANDER. A Toiler.	Mrs. CHARLOTTE B. COMAN. Early Summer.
HUGO BALLIN. The Sibylla Europa—Prophesied the Massacre of the Innocents. The Lesson.*	EANGER IRVING COUSE. Elk-Foot (Pueblo Tribe).*
CARROLL BECKWITH. The Blacksmith.*	KENYON COX. Plenty.*
FRANK ALFRED BICKNELL. October Morning.*	BRUCE CRANE. Autumn.*
RALPH ALBERT BLAKELOCK. At Nature's Mirror. The Canoe Builders. Moonrise. Sunset, Navarro Ridge, California Coast.	CHARLES COURTNEY CURRAN. The Perfume of Roses.
ROBERT FREDERICK BLUM. Canal in Venice, San Trovaso Quarter.	LEON DABO. Evening on the Hudson.*
GEORGE H. BOGERT. Sea and Rain.	ELLIOTT DAINGERFIELD. The Child of Mary.*
GEORGE DE FOREST BRUSH. The Moose Chase.	CHARLES HAROLD DAVIS. Summer.
WILLIAM GEDNEY BUNCE. Sunset, San Giorgio, Venice.	HENRY GOLDEN DEARTH. An Old Church at Montreuil.
EMIL CARLSEN. The South Strand.*	LOUIS PAUL DESSAR. Return to the Fold. The Watering Place.
WILLIAM MERRITT CHASE. Shinnecock Hills.	CHARLES MELVILLE DEWEY. The Harvest Moon. The Close of Day.
FREDERICK STUART CHURCH. The Black Orchid. Circe.*	THOMAS WILMER DEWING. Summer.
WILLIAM ANDERSON COFFIN. September.	PAUL DOUGHERTY. Sun and Storm.
J. FOXCROFT COLE. Late Afternoon near Providence.*	CHARLES WARREN EATON. Gathering Mists.*
	BENJAMIN R. FITZ. A Pool in the Forest.*
	JAMES WILLIAM FOSDICK. Adoration of Saint Joan of Arc.* (Fire etching on wood.)

¹ The paintings contributed during the fiscal year ending June 30, 1910, are indicated by means of asterisks. Three others of the paintings enumerated in the list were also new to the collection during the year, having been sent in place of the same number withdrawn, as follows: Louis Paul Dessar's "The Watering Place" replaces his "Evening at Longpré;" while Frederick Ballard Williams's "Conway Hills" and "A Glade by the Sea" are substitutes for "Sea Echoes" and "Old Viaduct at Little Falls, New Jersey," by the same artist.

- BEN FOSTER.
Birch-Clad Hills.
- GEORGE FULLER.
Ideal Head.*
Portrait of Henry B. Fuller, 1873.
- HENRY B. FULLER.
Illusions.*
- EDWARD GAY.
The Hillside.
- MISS LILLIAN MATILDE GENTH.
Adagio.*
- R. SWAIN GIFFORD.
Near the Ocean.
- SANFORD R. GIFFORD.
The Villa Malta.*
- ALBERT LOREY GROLL.
The Acoma Valley, New Mexico.*
- CHILDE HASSAM.
Spring, Navesink Highlands.
- WINSLOW HOMER.
High Cliff, Coast of Maine.
The Visit of the Mistress.
- WILLIAM HENRY HOWE.
My Day at Home.
- GEORGE INNESS.
Niagara.
Sundown.
Georgia Pines.
September Afternoon.
- ALPHONSE JONGERS.
Portrait of William T. Evans.
- WILLIAM SERGEANT KENDALL.
An Interlude.
- JOHN LA FARGE.
Visit of Nicodemus to Christ.
- WILLIAM LANGSON LATHROP.
The Three Trees.
- ERNEST LAWSON.
An Abandoned Farm.
- LOUIS LOEB.
The Siren.
- WILL H. LOW.
Christmas Morn.
- ALBERT P. LUCAS.
October Breezes.*
- WILLIAM EDGAR MARSHALL.
Portrait of Henry Wadsworth Longfellow.
Portrait of the Artist, age 23.
- HOMER D. MARTIN.
Lower Ausable Pond.
Evening on the Seine.
The Iron Mine, Port Henry, New York.*
- WILLARD LEROY METCALF.
A Family of Birches.
- ROBERT C. MINOR.
A Hillside Pasture.
Great Silas at Night.
- JAMES HENRY MOSER.
Evening Glow, Mount McIntyre.
- JOHN FRANCIS MURPHY.
The Path to the Village.
Indian Summer.
- CHARLES FREDERICK NAEGELE.
Mother Love.
- LEONARD OCHTMAN.
Morning Haze.*
- HENRY WARD RANGER.
Entrance to the Harbor.
Connecticut Woods.
The Cornfield.
Bradbury's Mill Pond No. 2.
Groton Long Point Dunes.*
- ROBERT REID.
The White Parasol.
- FREDERIC REMINGTON.
Fired On.*
- THEODORE ROBINSON.
La Vachère.
Old Church at Giverny.*
- ALBERT PINKHAM RYDER.
Moonlight.*
- WALTER SHIRLAW.
Among the Old Poets.
Roses.
- ROSWELL MORSE SHURTLEFF.
The Mysterious Woods.
- WILLIAM THOMAS SMEDLEY.
One Day in June.
- DWIGHT WILLIAM TRYON.
November.

JOHN HENRY TWACHTMAN.
Round Hill Road.
The End of Winter.
The Torrent.
Fishing Boats at Gloucester.*

ALEXANDER T. VAN LAER.
Early Spring.

DOUGLAS VOLK.
The Boy with the Arrow.

HENRY OLIVER WALKER.
Eros et Musa.
Musa Regina.

HORATIO WALKER.
Sheepyard—Moonlight.

FREDERICK J. WAUGH.
After a Northeaster.*
Southwesterly Gale, St. Ives.*

JULIAN ALDEN WEIR:
A Gentlewoman.
Upland Pasture.

WORTHINGTON WHITTREDGE.
Noon in the Orchard.

CARLETON WIGGINS.
Evening After a Shower.
The Pasture Lot.

IRVING RAMSAY WILES.
The Brown Kimono.

FREDERICK BALLARD WILLIAMS.
A Glade by the Sea.
Conway Hills.

ALEXANDER H. WYANT.
Autumn at Arkville.
The Flume, Opalescent River, Adirondacks.
Housatonic Valley.
Spring.

CULLEN YATES.
Rock-Bound Coast, Cape Ann.*

ART TEXTILES.

The collection of art textiles and other art objects started in the spring of 1908 by Mrs. James W. Pinchot, assisted by other ladies of Washington, was very materially increased during the year both by loans and by gifts, two of the latter being especially noteworthy. The importance of this movement, which it is designed shall lead to the formation of a worthy permanent collection, can not be overestimated, and it is gratifying to note that the interest on the part of contributors has continued unabated. That the subject is an appropriate one to encourage is demonstrated by the attention it receives in the important art museums of the world, and that it is appreciated by the public is shown by the number of visitors attracted to the hall in which the specimens are displayed. While appealing to the esthetic sense through beauty and delicacy of design, it is from a utilitarian point of view that the matter is mainly being considered by the Museum. By stimulating and furnishing motives for the higher grades of handiwork, several lines of industrial activities long fostered in European countries and for which a promising field exists in the United States can be very materially aided. For this purpose a large collection is required, containing as many and as varied examples as can be brought together, and it is hoped, therefore, that the efforts of the ladies, on whom the burden of the work has so far fallen, will be properly sustained.

With the transfer of the paintings to the new building and the removal of the western and middle screens, it became possible to

assign to this subject in March, 1910, the entire picture gallery in the older building. Many new cases were added and, under the supervision of Mrs. Pinchot, the specimens were rearranged in a far more satisfactory manner, and much was done toward perfecting the labeling before the year closed. Having been mainly dependent on loans, the composition of the collection has changed to some extent from time to time, but the additions have always exceeded the withdrawals and the quality of the collection as a whole has been greatly improved. At the end of the year it comprised 779 specimens, contributed by 47 persons, the additions during the year having numbered 386 specimens, of which 128 were permanent acquisitions through gift or purchase. Besides laces, which were the primary object of the movement, the collection contains fine examples of embroideries, brocades, velvets, tapestries, fans, enamels, porcelain, jewelry, silverware, etc.

Of laces there were two principal gifts. One of these, purchased in Europe by Mrs. Pinchot specially for the collection, comprised 61 valuable pieces selected with reference to filling gaps and to replacing specimens not of a character fully meeting museum requirements. The other, presented by Miss Anna R. Fairchild of New York and Paris, contained 12 pieces of lace, besides 7 fans, which had been bequeathed to her by the late Miss Julia S. Bryant, daughter of William Cullen Bryant. The gift was made in Miss Bryant's name. The laces were mostly fine large pieces of Burano, Flemish, Mechlin, Alençon, point de rose de Venice, Flanders, point d'Angleterre, etc., dating back about 200 years. Other donations consisted of two pieces of Tönder lace, a rare product of Scandinavian needlework, one from the Countess Carl von Moltke, the other from Mrs. Carl Kelleter; an old French embroidered lace collar from Miss Carrie Harrison; two fragments of old Binche lace from Miss Frances Morris; and a piece of modern Greek lace from Mrs. J. Harriet Goodell.

The loans of laces and drawn work were as follows: Mrs. Thomas F. Richardson, 20 examples of Guipure de Genes, Mechlin, Flemish, Irish, Milano point, antique Greek, and other varieties; Miss Julia Chadwick, 28 examples, including Valenciennes, Honiton, Point Appliqué, Venetian point, Burano and English pillow lace; Mrs. W. A. Slater, a piece of Burano lace; Mrs. H. B. Coolidge, a fine lace bertha; Mrs. William E. Curtis, two rare lace handkerchiefs made by the Indians of Paraguay and Venezuela; Mrs. W. Murray Crane, two fine altar cloths of the sixteenth century in cut and drawn work; Mrs. A. C. Barney, a spread of filet and drawn work, a lace scarf, a drawn-work scarf, a piece of crochet lace, and a Spanish filet lace; and Mrs. Arthur James Collier, handkerchiefs, collar and tie of Brussels point lace.

Of fabrics other than laces there were many noteworthy contributions, mostly loans, some of which were of a size and character to exhibit on the walls and large screen, which greatly enhanced the general attractiveness of the hall. Mr. Edson Bradley added to his deposit a brocade hanging of Louis XIV, two silver brocades and a cloth of gold of Louis XVI, and an Italian cut velvet embroidered panel of the sixteenth century. Mrs. Barney supplemented her collection by a number of beautiful and remarkable examples, including several panels of antique appliqué velvet, a brocade of Louis XVI, a rose and gold scapular, French and Italian embroidery of the seventeenth century and brocades of the seventeenth and eighteenth centuries. Miss Emily Tuckerman lent six exquisite tapestries of Italian and Flemish weaving and a splendid silk Persian rug; and Mrs. W. Murray Crane, three fine pieces of Spanish and French brocades. A piece of East Indian cloth of gold, interesting historically as having been presented by Capt. Robert Kidd to Mrs. Elizabeth Gardiner, of Gardiners Island, was deposited by Mrs. Elizabeth C. Hobson; and a handsome brocade ball dress of the late eighteenth century, by Miss Helen Munroe. A number of embroideries and examples of other needlework of Greece and the Balkan States were purchased.

Especially interesting is a collection of fine examples of the needlework of the American gentlewomen of the nineteenth century, together with some pieces from foreign sources, deposited by the Misses Long.

Among objects of a miscellaneous character mention should first be made of 19 pieces of Limoges enamel added by Mrs. Pinchot to her collection, which now becomes one of the most valuable and attractive of its kind in the country. The choice series of fans was increased by 13, of which 7 were included in the gift of Miss Fairchild above mentioned, the remainder having been lent by Mrs. Barney, Mrs. Julian James, Miss Chadwick, and the Misses Long. Other loans, comprising objects of great value and rarity, were as follows: From Mrs. Thomas F. Richardson, an old Italian silver drinking bowl, a double German drinking cup, a deer of Persian cloisonné of the ninth century, a German commemoration glass of the late eighteenth century, and a kissing plate of the fifteenth century; from Mrs. Barney, three twelfth century panel paintings from a monastery in France, two antique stained glass disks, a Venetian boat hook for a gondola, and several pieces of ceramics; and from the Misses Long exquisite objects of jewelry, brasses, workboxes, and sewing implements.

MISCELLANEOUS.

VISITORS.

The distribution of the exhibition collections between two or more buildings renders it manifestly impossible to determine the actual number of persons who visit the Museum regarded as a unit, and in this matter each building must continue, as heretofore, to be considered separately. The records for the past 30 years show a uniformly greater attendance at the older Museum building than at the Smithsonian building, but as soon as the new building has been entirely fitted up it is certain to assume the ascendancy in this respect.

During the past year the number of visitors to the old Museum building was 228,804, a daily average of 731, and to the Smithsonian building, 179,163, a daily average of 572. During the approximately $3\frac{1}{2}$ months since the gallery of art and part of the ethnological collection was opened, the attendance at the new building has been 50,403, a daily average of 560. The following tables show, respectively, the attendance during each month of the past year, and for each year beginning with 1881, when the Museum building was first opened to the public:

Number of visitors during the year ending June 30, 1910.

Year and month.	Old Museum building.	Smithso- nian building.	Year and month.	Old Museum building.	New Museum building.	Smithso- nian building.
1909.			1910.			
July.....	14,822	11,888	January.....	12,107	.....	8,067
August.....	24,425	20,239	February.....	14,864	.....	10,610
September.....	22,438	19,485	March.....	23,903	11,252	18,479
October.....	18,139	15,083	April.....	20,064	13,767	16,124
November.....	14,976	10,780	May.....	31,163	16,594	24,501
December.....	14,256	9,696	June.....	17,647	8,790	14,211
			Total....	228,804	50,403	179,163

Number of visitors to the Museum and Smithsonian buildings since the opening of the former in 1881.

Year.	Museum building.	Smithsonian building.	Year.	Old Museum building.	New Museum building.	Smithsonian building.
1881.....	150,000	100,000	1896-97.....	229,606	.....	115,709
1882.....	167,455	152,744	1897-98.....	177,254	.....	99,273
1883.....	202,188	104,823	1898-99.....	192,471	.....	116,912
1884 (half year).....	97,661	45,565	1899-1900.....	225,440	.....	133,147
1884-85 (fiscal year).....	205,026	105,993	1900-1.....	216,556	.....	151,563
1885-86.....	174,225	88,960	1901-2.....	173,888	.....	144,107
1886-87.....	216,562	98,552	1902-3.....	315,307	.....	181,174
1887-88.....	249,665	102,863	1903-4.....	220,778	.....	143,988
1888-89.....	374,843	149,618	1904-5.....	235,921	.....	149,380
1889-90.....	274,324	120,894	1905-6.....	210,886	.....	149,661
1890-91.....	286,426	111,669	1906-7.....	210,107	.....	153,591
1891-92.....	269,825	114,817	1907-8.....	299,659	.....	237,182
1892-93.....	319,930	174,188	1908-9.....	245,187	.....	198,054
1893-94.....	195,748	103,910	1909-10.....	228,804	50,403	179,163
1894-95.....	201,744	105,658	Total....	6,747,991	50,403	3,936,808
1895-96.....	180,505	103,650				

PUBLICATIONS.

Eleven complete volumes of publications were issued during the year, and also 49 papers comprising parts of volumes 37 and 38 of the Proceedings and 6 papers of Contributions from the National Herbarium.

The volumes consisted of the Annual Report of the Museum for 1909, volume 36 of the Proceedings, volume 12 of the Contributions from the National Herbarium, and the following 8 bulletins: No. 65, "Dendroid Graptolites of the Niagaran Dolomites at Hamilton, Ontario," by Ray S. Bassler; No. 66, "A Monographic Revision of the Twisted Winged Insects Comprising the Order Strepsiptera Kirby," by W. Dwight Pierce; No. 67, "Directions for Collecting and Preserving Insects," by Nathan Banks; No. 68, "A Monograph of West American Pyramidellid Mollusks," by William Healey Dall and Paul Bartsch; No. 69, "The Tænioid Cestodes of North American Birds," by Brayton Howard Ransom; No. 70, "The National Gallery of Art," by Richard Rathbun; No. 71, "A Monograph of the Foraminifera of the North Pacific Ocean: Part I. *Astrorhizidæ* and *Lituolidæ*," by Joseph Augustine Cushman; and No. 72, "Catalogue of Nearctic Spiders," by Nathan Banks.

Of the series "Contributions from the National Herbarium," the following numbers were issued: Volume 12, part 10, "Miscellaneous Papers," containing "The Genus *Cereus* and its Allies in North America," by N. L. Britton and J. N. Rose; "Five New Species of *Crassulaceæ* from Mexico," by J. N. Rose; "Supplement to the

Monograph of the North American Umbelliferae," by John M. Coulter and J. N. Rose; "Apogamy in the Maize Plant," by G. N. Collins; volume 13, part 2, "Three New Species of *Echeveria* from Southern Mexico," by J. N. Rose and J. A. Purpus; part 3, "The Grasses of Alaska," by F. Lamson-Scribner and Elmer D. Merrill; part 4, "New or Noteworthy Plants from Colombia and Central America—2," by Henry Pittier; part 5, "Relationships of the Ivory Palms," by O. F. Cook; and volume 14, part 1, "The Lichens of Minnesota," by Bruce Fink.

Copies of all of these publications were promptly distributed to the various addresses on the regular mailing lists, involving the wrapping, labeling, and mailing of approximately 65,000 books and pamphlets. About 22,000 additional copies of the same and earlier publications were also sent out on special requests.

In addition to the above, 20 papers based on Museum material and, for the most part, prepared by members of the Museum staff, were published in the Miscellaneous Collections of the Smithsonian Institution. Their titles are as follows: "Prehistoric Ruins of the Gila Valley," by J. Walter Fewkes; "Description of a New Frog from the Philippine Islands," by Leonhard Stejneger; "A New Genus of Fossil Cetaceans from Santa Cruz Territory, Patagonia, and Description of a Mandible and Vertebræ of *Prosqualodon*," by Frederick W. True; "Notes on Certain Features of the Life History of the Alaskan Fresh-water Sculpin," by Barton A. Bean and Alfred C. Weed; "Crystallographic Notes on Calcite," by J. E. Pogue; "A New Rodent of the Genus *Georychus*," by Edmund Heller; "Two New Rodents from British East Africa," by Edmund Heller; "A Heretofore Undescribed Stony Meteorite from Thomson, McDuffie County, Georgia," by George P. Merrill; "On a Remarkable Cube of Pyrite, Carrying Crystallized Gold and Galena of Unusual Habit," by J. E. Pogue; "A New Carnivore from British East Africa," by Gerrit S. Miller, jr.; "Descriptions of Fossil Plants from the Mesozoic and Cenozoic of North America. I," by F. H. Knowlton; "Two New Genera of Murine Rodents," by Gerrit S. Miller, jr.; "Five New Rodents from British East Africa," by Edmund Heller; "A New Rodent of the Genus *Saccostomus* from British East Africa," by Gerrit S. Miller, jr.; "A New Sable Antelope from British East Africa," by Edmund Heller; "Description of a New Species of Hippopotamus," by Gerrit S. Miller, jr.; "Mammals Collected by John Jay White in British East Africa," by N. Hollister; "The Scales of the Mormyrid Fishes with Remarks on Albula and Elops," by T. D. A. Cockerell; "Upper Yukon Native Customs and Folklore," by Ferdinand Schmitter; and "Description of a New Subspecies of African Monkey of the Genus *Cercopithecus*," by D. G. Elliot.

Besides the regular editorial work, there is a large amount of miscellaneous printing and binding, with all of which the editor's office is also charged. The principal item is probably the furnishing of labels for both the exhibition and reserve collections.

LIBRARY.

The library of the Museum contains 38,300 volumes and 61,858 unbound papers, the additions during the year having consisted of 2,056 books, 5,541 pamphlets, and 307 parts of volumes. With an annual appropriation of but \$2,000, which constitutes the only fund for purchasing, it is wholly impossible to maintain the library on the basis required for the study and classification of the collections. In fact, except for the increment through exchanges and donations, the working benefits of the library would be very inadequate, and this in spite of the fact that the Library of Congress and several Department libraries are freely placed at the service of the Museum. Among Museum officers and associates who made important gifts to the library during the year were Dr. Theodore N. Gill, Dr. Charles A. White, Dr. Charles W. Richmond, Mr. E. A. Schwarz, Dr. O. P. Hay, and Dr. Marcus Benjamin.

In common with all other branches of the Museum, the limited quarters assigned to the library have become more and more congested each year, interfering with the continued systematic arrangement of the publications, and causing inconvenience in cataloguing and other parts of the work. For this condition a remedy will be found during the coming year, in the more ample space which it will be possible to allot to this subject. Good progress was made in the cataloguing of publications, and volumes to the number of 435 were prepared and sent to the Government Printing Office for binding. Each of the divisions and principal offices of the Museum has a sectional library, consisting of the works pertaining specially to its province, and these are supervised by the central library, in which they are recorded the same as is the main body of publications. There are 29 of these sectional libraries.

PHOTOGRAPHY.

The alterations mentioned in the last report as necessary to place the photographic laboratory in a condition to meet the increased work and to generally improve its facilities were commenced at the beginning of the year and completed during the summer. They included a new skylight, new side lights for use with the photomicroscope, and an extension over the adjoining lower roof for blue printing. For the purposes of a museum this laboratory is probably not surpassed in the country as regards both its general arrangements and its equipment.

It is impossible to adequately describe the character and value of the work done in photography. Its primary object is to produce illustrations for the publications of the Museum, but in some subjects photographic prints furnish the only means for making an intelligible record of specimens in connection with the cataloguing and descriptive notes. Photography has also to be extensively resorted to for the reproduction of plans relating to structural features of the buildings and of furniture. During the past year the work accomplished may be briefly summed up as follows: The number of negatives made was 1,136; of silver prints, 1,410; of velox prints, 905; of blue prints, 2,777; of lantern slides, 24; of bromide enlargements, 10; and of transparencies, 10.

CONGRESSES AND MEETINGS.

Geological Society of America.—At the twenty-second annual meeting of this society, held in Boston, Massachusetts, from December 28 to 31, 1909, in connection with the meeting of the American Association for the Advancement of Science, the Museum was represented by Dr. Ray S. Bassler, curator of invertebrate paleontology.

National Academy of Sciences.—For the public sessions of the National Academy at its annual meeting in Washington from April 19 to 21, 1910, temporary arrangements were made in one of the exhibition halls in the Museum building, accommodations for the business meetings being furnished in the Smithsonian building.

International Congress of Botany.—Mr. Frederick V. Coville, curator of the division of plants, represented the Museum at the International Congress of Botany, held in Brussels, Belgium, May 14 to 22, 1910.

Seventeenth International Congress of Americanists.—At this congress, held in Buenos Aires, Argentina, May 16 to 20, 1910, Dr. Aleš Hrdlička, curator of the division of physical anthropology, served as a delegate on behalf of the Institution and Museum, and also of the United States Government.

Fifth International Congress on Ornithology.—Mr. William Dutcher, of New York City, acted as the representative of the Government, the Institution, and the Museum at this congress, held in Berlin, Germany, May 30 to June 4, 1910.

Eighth International Zoological Congress.—Dr. Charles Wardell Stiles, of the Public Health and Marine-Hospital Service, Dr. William R. Kellicott, of Goucher College, Baltimore, Maryland, Dr. Herbert Haviland Field, director of the Concilium Bibliographicum, Zurich, Switzerland, and Mr. Austin H. Clark, of the Museum staff, have been designated as delegates on the part of the Institution and Museum, as well as of the United States Government, to the Eighth International Zoological Congress, to be held in Gratz, Austria, August 15 to 20, 1910.

ORGANIZATION AND STAFF.

Following the death of Prof. Otis T. Mason on November 5, 1908, Dr. Walter Hough, the assistant curator of ethnology, was made acting head curator of the department of anthropology. On January 1, 1910, however, Prof. William H. Holmes relinquished his position as Chief of the Bureau of American Ethnology in order to again take up his duties in the Museum, and was returned to the head curatorship of this department, which he had filled from the time of its organization in 1897 until called to the bureau in 1902. Dr. Hough and Dr. Aleš Hrdlička, who, as assistant curators, had long been in charge of the divisions of ethnology and physical anthropology, respectively, were both made curators during the year, the former on January 1, the latter on March 28, 1910. Mr. Arthur P. Rice was designated a collaborator in the division of ethnology on August 12, 1909.

The development of the exhibition collections in biology, long held in check through the lack of accommodations, but now become a most important and necessary feature of the work in connection with the new building, has demanded a more definite organization. This was effected during the year, and Dr. James E. Benedict, for many years assistant curator of marine invertebrates, was placed in charge as chief of exhibits, his appointment dating from November 16, 1909.

In the division of mammals, Dr. M. W. Lyon, jr., assistant curator, was given indefinite leave on October 5, 1909, being succeeded by Mr. Ned Hollister, who received a temporary appointment on January 3, 1910, and a permanent one on March 21, following. The services of Mr. H. C. Oberholser, of the Biological Survey, were secured temporarily, beginning February 1, to assist with the collections in ornithology. Mr. Austin H. Clark, previously a collaborator, was made an assistant curator in the division of marine invertebrates on February 16, 1910, and Mr. Waldo C. Schmitt, a temporary aid in the same division on February 21. Mr. Paul R. Myers was appointed aid in the division of insects on March 1, 1910, in succession to Mr. D. H. Clemons transferred to the Department of Agriculture. Miss Mary Breen was designated collaborator in the division of mollusks, beginning February 25, 1910, and Mr. M. S. Curtis, a temporary aid in the division of plants from April 12 to June 30, 1910.

Dr. J. E. Pogue was appointed assistant curator of mineralogy on July 1, 1909, to succeed Mr. Wirt Tassin, who had resigned to engage in business in May previous. Mr. F. B. Laney, assistant curator of geology, resigned on May 15, 1910, to enter the service of the Geological Survey.

It is necessary to record the decease during the year of two distinguished associates of the Museum, Dr. Robert Edwards Carter Stearns and Dr. Charles Abiathar White, both of whom had long been

actively connected with its operations, one in the field of zoology, the other in that of paleontology.

Dr. Stearns, whose death occurred on July 27, 1909, was a native of Boston, Massachusetts, a son of Charles Stearns, and was born February 1, 1827. He was educated in the public schools, followed by a course of mercantile training, and from his earliest years evinced a deep love of nature, which was fostered by his father. Even in boyhood he displayed unusual artistic ability, and, though his early employment was in a bank and in farming, when only 22 years old he painted a panorama of the Hudson River from the mouth of the Mohawk to Fort William, which he exhibited with much success. Turning his attention to mining, he explored the coal fields of southern Indiana, and in 1854 was made resident agent of several copper mines in the Lake Superior region of Michigan. In 1858 he went to San Francisco, California, where he became a partner in a large printing establishment which published the "Pacific Methodist," a weekly religious paper, of which, for a time, he acted as editor.

In 1862 Mr. Stearns was appointed deputy clerk of the Supreme Court of California, but he relinquished this post in the following year to accept the secretaryship of the State Board of Harbor Commissioners, from which, however, he was obliged to resign in 1868 on account of ill health. Coming East, he joined the late Dr. William Stimpson and Col. Ezekiel Jewett in an exploration of the invertebrate fauna of the coast of southwestern Florida, during which large collections were made for the Smithsonian Institution. In 1874 he was elected secretary of the University of California, being the business executive of that institution under the presidency of Dr. Daniel C. Gilman. After serving eight years in this capacity, ill health again forced him to give up the confining duties of office work, and upon his retirement the University, in recognition of his services to the cause of education in California and of his scientific attainments, conferred upon him the honorary degree of doctor of philosophy. He became connected with the United States Fish Commission in 1882, was appointed paleontologist to the United States Geological Survey in 1884, and assistant curator of mollusks in the National Museum at about the same time, his title in the latter establishment being later changed to adjunct curator. The Museum also acquired his collection of mollusks. Age and infirmity obliged him to return to the more genial climate of California in 1892, and he settled in Los Angeles, continuing, as his strength permitted, his researches into the malacology of the Pacific coast. He married on March 28, 1850, Mary Anne Libby, daughter of Oliver Libby, of Boston, and is survived by a daughter.

Dr. Stearns was an earnest student of mollusks from boyhood; his early experience also led him to interest himself in horticulture

and landscape gardening, and his ability in this line is attested by the beauty of the University grounds at Berkeley, which were developed under his superintendence. His knowledge of the Pacific coast mollusks was profound, and a long list of papers on this topic and on the shells of Florida was the result. He also contributed extensively on horticulture and gardening. He was an enthusiastic supporter of the California Academy of Sciences in its early days, and became a member of numerous other scientific societies both at home and abroad.

Dr. Stearns was a man of sanguine temperament, with a lively sense of humor, and high moral character. His reading was wide, his learning never obtrusive, his interest in art, literature, and all good causes intense. He was a staunch friend and, for a righteous object, ever ready to sacrifice his own material interests.

Dr. Charles Abiathar White, associate in paleontology, who had been connected with the National Museum and its collections of invertebrate fossils since 1877, died on June 29, 1910. He was born in North Dighton, Massachusetts, on January 26, 1826. At the age of 12 he removed with his father's family to Burlington, Iowa, where he resided until 1864. Here his natural taste for scientific subjects was early manifested, and with little special training or guidance he began to investigate the natural history of the interesting frontier region in which he grew up. It is doubtless true that the rich fossiliferous deposits of the neighborhood had great influence in directing his attention to paleontology and stratigraphic geology, which became his life work and in which he gained well-merited eminence as an earnest, philosophical student. After graduating from Rush Medical College, Chicago, Dr. White began the practice of medicine in Iowa City in 1864, but his zeal and ability in scientific research were soon recognized and he gladly abandoned the medical profession when, in 1866, he was appointed State geologist. In the following year, while still continuing the State survey, he became professor of natural history in the Iowa State University. He remained in charge of the State geological survey until it was suspended, in 1870, and continued in the university professorship until he was called to a similar chair in Bowdoin College in 1873.

Dr. White removed to Washington in 1875, but while still at Bowdoin he began his work for the United States Government by preparing an extensive report on the invertebrate fossils collected by Wheeler's survey west of the one hundredth meridian. He was successively a member of Powell's Survey of the Rocky Mountain Region, of Hayden's Survey of the Territories, and of the United States Geological Survey. This service was continuous until 1892, except for a period between 1879 and 1882, when he was on the paid staff of the National Museum as curator of invertebrate fossils.

The numerous articles, reports, and monographs in which Dr. White recorded the principal scientific results of his official work are characterized by a clear, simple style which never permits any doubt of the author's meaning or of his honesty of purpose. An annotated bibliography of his writings was published by the National Museum in Bulletin 30, and a supplement in volume 20 of the Proceedings brought it down to 1897 with a total of 211 entries. After retiring from active work he continued to publish occasional articles on general biological topics until the last year of his life.

During all the years of Dr. White's service with the various Government surveys his office work was done in the National Museum, where he was actively connected with the care and preservation of the collection of invertebrate fossils to which his field work so largely contributed. He came to the Institution at a critical period in the history of its paleontologic collections. Prof. F. B. Meek, who long had charge of them had recently died and new material was rapidly coming in from the various surveys and exploring expeditions in the western Territories. Dr. White immediately took up the work of properly caring for the collections, at first unofficially and afterward as curator. His intimate acquaintance with Prof. Meek and his work, his knowledge of the subject and his systematic, painstaking habits enabled him to render invaluable service at that time. Scattered types were recognized, catalogued and fully labeled, those that had not been illustrated were figured, and the records and collections of the whole department were systematized. After retiring from the active duties of a curatorship he continued his connection with the National Museum as an associate. Dr. White was a member of the National Academy of Sciences and of many important scientific societies both in this country and in Europe.

THE MUSEUM STAFF.

[June 30, 1910.]

CHARLES D. WALCOTT, Secretary of the Smithsonian Institution, Keeper *ex officio*.
RICHARD RATHBUN, Assistant Secretary, in charge of the United States National Museum.
W. DE C. RAVENEL, Administrative Assistant.

SCIENTIFIC STAFF.

DEPARTMENT OF ANTHROPOLOGY:

William H. Holmes, Head Curator.
Division of Ethnology: Walter Hough, Curator; J. W. Fewkes, Collaborator; Arthur P. Rice, Collaborator.
Division of Physical Anthropology: Aleš Hrdlička, Curator; T. F. Lane, Aid.
Division of Historic Archeology: I. M. Casanowicz, Assistant Curator.
Division of Prehistoric Archeology: William H. Holmes, Curator; E. P. Upham, Aid; J. D. McGuire, Collaborator.
Division of Technology: George C. Maynard, Assistant Curator.
Division of Graphic Arts: Paul Brockett, Custodian.
Section of Photography: T. W. Smillie, Custodian.
Division of Medicine: J. M. Flint, United States Navy (Retired), Curator.
Division of History: A. Howard Clark, Curator; T. T. Belote, Assistant Curator.
Associates in Historic Archeology: Paul Haupt, Cyrus Adler.

DEPARTMENT OF BIOLOGY:

Frederick W. True, Head Curator; James E. Benedict, Chief of Exhibits.
Division of Mammals: Gerrit S. Miller, jr., Curator; Ned Hollister, Assistant Curator.
Division of Birds: Robert Ridgway, Curator; Charles W. Richmond, Assistant Curator; J. H. Riley, Aid.
Division of Reptiles and Batrachians: Leonhard Stejneger, Curator; R. G. Paine, Aid.
Division of Fishes: B. W. Evermann, Curator; Barton A. Bean, Assistant Curator; Alfred C. Weed, Aid.
Division of Mollusks: William H. Dall, Curator; Paul Bartsch, Assistant Curator; William B. Marshall, Aid; Mary Breen, Collaborator.
Division of Insects: L. O. Howard, Curator; J. C. Crawford, Assistant Curator; Paul R. Myers, Aid.
Section of Hymenoptera: J. C. Crawford, in charge.
Section of Myriapoda: O. F. Cook, Custodian.
Section of Diptera: D. W. Coquillett, Custodian.
Section of Coleoptera: E. A. Schwarz, Custodian.
Section of Lepidoptera: Harrison G. Dyar, Custodian.
Section of Orthoptera: A. N. Caudell, Custodian.
Section of Arachnida: Nathan Banks, Custodian.
Section of Hemiptera: Otto Heidemann, Custodian.

DEPARTMENT OF BIOLOGY—Continued.

Division of Marine Invertebrates: Richard Rathbun, Curator; Mary J. Rathbun, Assistant Curator; Austin H. Clark, Assistant Curator; Harriet Richardson, Collaborator.

Section of Helminthological Collections: C. W. Stiles, Custodian; B. H. Ransom, Assistant Custodian.

Division of Plants (National Herbarium): Frederick V. Coville, Curator; J. N. Rose, Associate Curator; W. R. Maxon, Assistant Curator; P. C. Standley, Assistant Curator.

Section of Cryptogamic Collections: O. F. Cook, Assistant Curator.

Section of Higher Algæ: W. T. Swingle, Custodian.

Section of Lower Fungi: D. G. Fairchild, Custodian.

Associates in Zoology: Theodore N. Gill, C. Hart Merriam, W. L. Abbott, Edgar A. Mearns, United States Army (Retired).

Associates in Botany: Edward L. Greene, John Donnell Smith.

DEPARTMENT OF GEOLOGY:

George P. Merrill, Head Curator.

Division of Physical and Chemical Geology (Systematic and Applied): George P. Merrill, Curator.

Division of Mineralogy: F. W. Clarke, Curator; J. E. Pogue, Assistant Curator.

Division of Invertebrate Paleontology: R. S. Bassler, Curator; Lancaster D. Burling, Assistant Curator.

Mesozoic Collection: T. W. Stanton, Custodian.

Cenozoic Collection: W. H. Dall, Associate Curator.

Madreporarian Corals: T. Wayland Vaughan, Custodian.

Division of Vertebrate Paleontology:

Mammalian Collection: James W. Gidley, Custodian.

Reptilian Collection: Charles W. Gilmore, Custodian.

Division of Paleobotany: David White, Associate Curator; A. C. Peale, Aid; F. H. Knowlton, Custodian of Mesozoic Plants.

Associate in Mineralogy: L. T. Chamberlain.

Associate in Paleobotany: Lester F. Ward.

DEPARTMENT OF MINERAL TECHNOLOGY:

Charles D. Walcott, Curator.

NATIONAL GALLERY OF ART:

William H. Holmes, Curator.

ADMINISTRATIVE STAFF.

Chief of Correspondence and Documents, R. I. Geare.

Disbursing Agent, W. I. Adams.

Superintendent of Construction and Labor, J. S. Goldsmith.

Editor, Marcus Benjamin.

Editorial Clerk, E. S. Steele.

Assistant Librarian, N. P. Scudder.

Photographer, T. W. Smillie.

Registrar, S. C. Brown.

Property Clerk, W. A. Knowles.

LIST OF ACCESSIONS TO THE COLLECTIONS DURING THE FISCAL YEAR 1909-10.

[Except when otherwise indicated, the specimens were presented, or were transferred by bureaus of the Government in accordance with law.]

ABBOT, Lieut. STEPHEN, U. S. ARMY, Fort Bayard, N. Mex.: Pottery fragments found near Fort Bayard (51489).

ABBOTT, Dr. WILLIAM L.: Mammals, birds, reptiles and ethnological material from Borneo (50422); ethnological material from Borneo (50454).

ABRAMS, LE ROY, Stanford University, Cal.: 9 living plants, *Dudleya*, from California (50728).

ACADEMY OF NATURAL SCIENCES, Philadelphia, Pa.: 13 bird skins, *Hypothymis* (50592); 40 skins of Trogons (51265); 593 skins of woodpeckers (51560).
Loan.

ADAMS, C. L., Globe, Ariz.: Specimen of mutillid, *Mutilla gloriosa* (50395).

ADAMS, W. I., Smithsonian Institution: An Indian stone pipe (50854).

AGRICULTURE, DEPARTMENT OF:

Bureau of Animal Industry: Fetus of a zebra ass hybrid (50490); fetus of a female Grevy zebra, *Equus grevyi* (50580); male zebra ass hybrid (51093).

Bureau of Biological Survey: Living specimen of plant, *Echinocereus* (50297); 2 living specimens of *Opuntia* from Illinois and Kentucky (50351); 2 living specimens of *Opuntia* (50387); 11 living cacti from North Dakota (50388); 55 plants from Missouri, Illinois, and Kentucky (50402); specimen of living *Opuntia*, from Arizona (50411); living specimen of *Opuntia* from South Dakota (50428); 2 living specimens of cacti from Arizona (50435); living specimen of *Mamillaria* from Montana

AGRICULTURE, DEPARTMENT OF—Con.

(50438); 3 living specimens of *Opuntia* from Arizona (50444); 2 living specimens of Cactaceæ from Arizona (50445); 2 specimens of living *Opuntia* from New Mexico (50478); specimen of living *Mamillaria* from Montana (50482); 2 specimens of living *Opuntia* from Idaho (50487); 3 living specimens of *Opuntia* from Montana (50499); specimen of *Echinocereus* from New Mexico (50500); 5 living plants from New Mexico (50549); 5 living plants, Cactaceæ, from Arizona (50551); 2 plants, *Ribes* and *Holodiscus*, from California (50582); living specimen of *Mamillaria grahami* from Arizona (50635); 5 living specimens of Cactaceæ from New Mexico (50651); 5 living specimens of *Opuntia* from Utah (50657); 3 specimens of Isopod, *Anilocra* new sp., from a garpike at Savannah, Ga., through W. J. Hoxie (50678); 6 living cacti from Utah (50684); 3 living specimens of *Echinocerei* from New Mexico (50696); 2 living specimens of *Opuntia* from New Mexico (50723); 20 plants from the eastern part of the United States (50768); 4 living plants, Cactaceæ, from New Mexico (50769); 2 living specimens of Cactaceæ from New Mexico (50853); 2 living specimens of Cactaceæ collected in Utah by C. Birdseye (50859); 2 living specimens of *Opuntia* collected in North Carolina by W. L. McAtee (50861); 3 living specimens of Cactaceæ collected in New Mexico by E. A. Goldman (50894); 270 plants collected in the southwestern part of the United States by E. A. Goldman (50947); 7

AGRICULTURE, DEPARTMENT OF—Con.

plants collected in California by Dr. C. Hart Merriam (51109); 41 plants collected in Arizona by E. W. Nelson (51138); nest of a bush-tit, *Psaltiriparus* (51143); 6 specimens of landshells collected by Vernon Bailey and D. D. Streeter at Coos Bay, Oreg. (51176); 103 birds' eggs (46 sets) and a nest from Mexico (51206); 9 plants from the western part of the United States (51216); 4 specimens of Amphipods representing the species *Gammarus confervicolus* (51327); 20 specimens of Orthoptera (51444); reptiles and batrachians from Colorado and Wyoming, collected by M. Cary (51613); 10 birds' eggs (3 sets) (51635); 3 specimens of *Opuntia* collected in Montana by C. Birdseye, and 2 specimens of Cactaceæ collected in Montana by E. A. Preble (51659); 50 plants collected in Washington and Oregon by Dr. C. Hart Merriam and Vernon Bailey (51672); 8 eggs and 12 nests of birds from California, received from H. W. Henshaw (51699).

Bureau of Entomology: 4 specimens of Isopods, *Armadillidium vulgare* from Cincinnati (50524); 300 specimens of Microlepidoptera collected by C. N. Ainslie in New Mexico (50575); 39 living specimens of Cactaceæ from the southwestern part of the United States (50873); 2 parasitic Hymenoptera (50902); 79 specimens of Diptera (51140); 51 specimens of Hemiptera and Coleoptera (51190); about 200 parasitic Hymenoptera bred at the Gipsy Moth Parasitic Laboratory, Melrose Highlands, Mass. (51215); 206 specimens of Coleoptera (51244); 37 specimens of Coleoptera and Hemiptera (51293); 1,272 specimens of Diptera collected by C. H. T. Townsend in Mexico (51331); 20 specimens of Coleoptera, mostly types of species described by W. D. Pierce (51353); 50 butterflies from the Canal Zone (51380); 450 specimens of Coleoptera (51400); about 5,000 insects collected in Tampico, Mexico, by E. A. Schwarz (51401); about 5,000 insects from Paraguay collected by K. Fiebrig (51418); about 30 specimens of parasitic Hymenoptera (51481); through

AGRICULTURE, DEPARTMENT OF—Con.

C. V. Piper, 100 specimens of insects received from George F. Berthoud, Waroona, Western Australia (51539).

Bureau of Plant Industry: 9 living cacti from Colorado (50324); 450 plants from Mexico, collected by Messrs. Cook, Collins, and Doyle (50389); 2 specimens of living *Opuntia* from Texas (50481); 3 specimens of Cactaceæ from Texas (50515); living specimen of *Opuntia* from Texas (50561); 3 living specimens of *Opuntia* from Texas (50574); 3 living specimens of Cactaceæ from Texas (50581); 2 living specimens of *Opuntia* from Texas (50600); 2 living specimens of Cactaceæ from Kansas (50630); specimen of *Echinocereus* from Texas (50631); 2 living specimens of *Opuntia* from Kansas (50650); 4 living specimens of *Opuntia* from Kansas (50663); 6 living specimens of *Opuntia* from New Mexico (50666); specimen of living *Opuntia* from Kansas (50669); 15 living specimens of *Opuntia* (50687); living specimen of *Opuntia pulchella* from Nevada (50697); 61 plants from Kansas and Nebraska (50780); 23 plants from the Arkansas National Forest; 1 plant from Alaska, collected by L. M. Prindle, and 1 plant from Hawaii (50835); 20 plants from Alaska (50868); 3 living specimens of *Nopalea* collected in South Carolina by W. L. McAtee (51026); 2 living specimens of *Opuntia* collected in Florida by W. L. McAtee (51125); land shells representing 3 species from mountains near Balaklava, Crimea, Russia, collected by Frank N. Meyer (51163); 8 specimens of North American grasses (51247); 18 photographs of plants, *Dioscorea*, from the United States, received through H. H. Bartlett (51384); land shells representing 4 species from near Novorostisk, Caucasus, Russia, collected by F. N. Meyer (51424); 3 specimens of plants collected in Panama by Charles F. Mason (51479); living specimen of cactus, *Opuntia*, collected in Nevada by F. B. Headley (51515); 295 plants from the United States (51584).

Forest Service: 4 specimens of *Cicuta grandifolia* (50321); 6 pitched water

AGRICULTURE, DEPARTMENT OF—Con.

baskets, a scoop tray, and an antler wedge from the Santa Barbara National Forest (50376); 5 living specimens of *Opuntia* and *Yucca* collected in New Mexico by G. A. Pearson (50698); 125 plants collected in Arizona by G. A. Pearson (51126); about 1,750 specimens of plants collected mainly in Utah by Ivar Tidestrom in 1907, 1908, and 1909 (51453); about 100 specimens of plants from Utah collected by W. C. Clos (51454).

AINSLIE, C. N., Cimarron, N. Mex.: 5 plants of *Echinocereus viridiflorus* from New Mexico (50517); specimen of *Eriogonum* sp., from New Mexico (50552); 10 living specimens of Cactaceæ from New Mexico (50572; 50692); 3 plants from New Mexico (50603); specimen of *Artemisia* from New Mexico (50705); specimen of living *Opuntia* from New Mexico (50720).

ALASKA - YUKON - PACIFIC EXPOSITION, Seattle, Wash. (through U. S. Government Board of Managers): A collection of ethnological objects from the Hawaiian and other islands in the South Sea, consisting of 431 specimens, collected by N. B. Emerson and purchased from him by the Government Board of Managers (50958); collection of photographs of Alaska, United States, and the South Pacific (50990); collection of enlargements of photographs of historical scenes in the Philippines, made by the U. S. Signal Corps (50991); village group of early Hawaiians, designed and modeled by I. B. Millner (50992); a Zuffi olla (50993); insignia of the Order of Kamehameha conferred on Captain William Grenville Temple, U. S. Navy, 1873 (50994); family group of the Samoan Islands, Navigator Archipelago, South Pacific Ocean (50995); papers, etc., describing the work under the American Board of Missions to Hawaii (50996); series of photographs representing buildings, ancient and modern, and data of church, settlement, and school work of Honolulu, Hawaiian Islands (50997); series of photographic enlarge-

ALASKA - YUKON - PACIFIC EXPOSITION—Continued.

ments of Hawaiian Island subjects (50998); family group of the Bontoc Igorot, Luzon, P. I. (50999); family group of the Negritos of Zambales, Philippine Islands (51000); photographs of Alaskan-Russian churches and clergy (51002); model of St. Michael's Cathedral, Sitka, Alaska (51003); map of Alaska showing, in red, Russian settlements and churches (51004); map and facsimiles of treaties relative to the territorial expansion of the United States (51005); model, in wood, of the Santa Barbara Mission, California (51006); photographs of early California newspapers (51007); portraits of eminent persons connected with the history of the Philippine Islands (51008); collection of portraits of eminent persons connected with the history of the Pacific coast and Alaska (51009); engravings, photographs, etc., of historic scenes and landmarks of the Philippines and the western coast of America (51010); bird's-eye view of the prehistoric ruin called Casa Grande, Arizona, and a view of Cliff Palace, Mesa Verde National Park, Colorado (2 paintings) (51013); 3 models of Casa Grande ruin, Pinal County, Ariz. (51014); photographic portraits of eminent persons connected with the history of the Hawaiian Islands (51015); photographs relating to the history of Alaska (51016).

ALBANY MUSEUM. (See under Grahams-town, Cape Colony, South Africa.)

ALEXANDER, M. L., Ardmore, Okla.: Samples of sand (51058).

ALLARD, H. A., Department of Agriculture, Washington, D. C.: Snake, *Storeia*, from Massachusetts (50824); snake, lizard, and 5 frogs from Georgia (51518).

ALPS, H. F., Reno, Nev.: Specimens of volcanic glass from Washoe County, Nev. (51218).

AMERICAN COLORTYPE COMPANY, New York City: 11 specimens of process color printing (50338).

- AMERICAN LITHOGRAPHIC COMPANY, New York City: 23 sheets of process color prints (50341).
- AMERICAN MUSEUM OF NATURAL HISTORY, New York City: 1,246 skins of hummingbirds and swifts (50347: loan); 108 skins of hummingbirds (50968: loan); 132 skins of Trogons (51262: loan); brain cast of *Tyrannosaurus* (51305: exchange); cast of Maori (New Zealand) tabu eating-funnel (51457); 6 specimens representing 2 species of parasitic copepods (51596); 1,651 skins of woodpeckers (51620: loan).
- AMES, Miss SUSAN, Hudson, Mass. (through Horace E. Stowe, Newtonville, Mass.): Revolver of the Eagle Arms Company (51404).
- ANDERSON, Rev. R. W., Uvalde, Tex.: Moth, *Erebus odora* (50701).
- ANDREWS, Dr. E. A., Baltimore, Md.: 39 microscopic slides of *Penæus* (51529).
- ANDREWS, R. H., Washington, D. C.: A counterpane in cross-stitch made in 1837 (51534: loan).
- ANTHONY, A. W., Vale, Oreg.: Fragments of fossil bones (50797).
- ANTHONY, H. E., Portland, Oreg.: 37 mammals and a trout (50305).
- ARCOS, Duchess DE, Rome, Italy: 18 paintings and a marble statue of Bacchante by Bien Aimé (51701: loan).
- ARNALOT, Father ANTONIO, S. J., Davao, Mindanao, P. I.: 415 specimens representing 197 species of mollusks from Davao (50359).
- ARNOLD ARBORETUM, Jamaica Plain, Mass.: 2 packets of seeds (50354).
- AULT AND WIBORG COMPANY, Cincinnati, Ohio: Prints, color-plates and a poster album (51322).
- AYLING, CHARLES F., Syracuse, N. Y.: A sword made by Andrea Farara and used during the Revolutionary War by Col. David Jones, an officer in Washington's army (51105: loan).
- BAKER, A. B., National Zoological Park, Washington, D. C.: 2 specimens of coral from Kilindini Harbor, Africa (50964).
- BAKER, Prof. C. F., Claremont, Cal.: 4 specimens of *Anarsia lineatella* (51435).
- BAKER, Dr. FRED., San Diego, Cal.: Shells representing 12 species from Alaska (50897).
- BAKER, HENRY D., American Consul, Hobart, Tasmania: Three cases containing birds, mammals, insects, and fossil bones from Tasmania and Australia (50319); 3 large earthworms representing the species *Megascolides tasmanicus* (51094). (See also under Mount Lyell Mining and Railway Company, Queens-town, Tasmania.)
- BANFIELD, ARTHUR C., London, England: 14 stereoscopic photographs of protozoans, insect eggs, mosses, etc. (51166); 33 stereoscopic photographs of miscellaneous objects (51326). Exchange.
- BANKS, J. A., Victoria, Va.: Specimen of beetle representing the species *Lucanus elaphus* (51644).
- BARBADOS, WEST INDIES, IMPERIAL DEPARTMENT OF AGRICULTURE: Ostracods and phyllopods from a pond in Barbados (51243).
- BARBOUR, THOMAS, Museum of Comparative Zoology, Cambridge, Mass.: Specimen of *Pipa americana* from Dutch Guiana (50887: exchange); lizards from Cuba (51319); 14 lizards from the East Indies and Jamaica (51475: exchange); lizard and frogs from Nicaragua and New Guinea (51592).
- BARLOW, Dr. C. H., Washington, D. C.: Three prints representing mythological subjects, from Huchow, China (50926).
- BARNES, ROLLIN S., Wakeman, Ohio: Specimen of lamprey eel, *Ichthyomyzon concolor*, from Vermilion River, Ohio (51559).
- BARNES, Dr. WILLIAM, Decatur, Ill.: 4 specimens of *Megathymus* (51296: exchange).
- BARNEY, Mrs. A. C., Washington, D. C.: Collection of art objects (51711); carved ivory plaque of the early part of the 18th century; silver plaque, Louis XVI, France; silver chalice, and an old manuscript antiphony (50294). Loan.

- BARR, Rev. DAVID, Washington, D. C.: Photograph of a map of the city of Manila, executed in 1739 (50871); a Filipino dagger (50890); a Moro kris from Mindanao, P.I. (51365: loan).
- BARROTT, A. F., Washington, D. C.: A skull from the village of Owego, New York (50987: exchange).
- BARTLETT, H. H., Washington, D. C.: 19 specimens of moss, *Sphagnum*, from various parts of the United States (51336); 61 specimens of plants, cryptogams, mainly from New England (51419: exchange); 2 plants from Minnesota (51439); 7 specimens of *Lacinia-ria* collected in Georgia (51633).
- BASS, W. W., Grand Canyon, Ariz.: Massive and shredded specimens of serpentine asbestos from Hockatai Mine, Asbestos Canyon (51224).
- BAUSCH, PAUL, Washington, D. C.: Piece of timber with living ship-worms from the Hog Island Life Saving Station, Va. (50772).
- BAXLEY, IVAN A., Sydney Mines, Nova Scotia, Canada: Specimen of opalescent labradorite (50742).
- BEALE, Hon. TRUXTON, Bakersfield, Cal.: Bronze tablet, executed by Isidore Konti, in 1910, commemorating an act of heroism by Acting Lieutenant (afterward General) Edward F. Beale and Kit Carson during the War with Mexico, which is inscribed on the tablet as follows: "Beale and Carson hailing Stockton's flagship. An incident of the Mexican War. The army sent from Santa Fe to occupy California was met and defeated by the Mexicans at San Pasquale. The American forces were driven upon a butte in the desert, on which there was no water, and there surrounded by the Mexican forces. Edward F. Beale and Kit Carson, both famous explorers of the West, volunteered to get through the Mexican lines and get reinforcements from Stockton's fleet at San Diego. They succeeded in crawling past three cordons of Mexican sentries in the night, and by hiding in ravines in the day and travelling by night they reached Stockton's fleet after enduring great hardships" (51514).
- BEAN, Dr. ROBERT BENNETT, Philippine Medical School, Manila, P. I.: Anatomical specimens (51415).
- BEAN, Dr. TARLETON H., New York City: Specimen of whitefish, *Argyrosomus tul-bee*, from Oneida Lake, N. Y. (51367).
- BEATTIE, R. K., Pullman, Wash.: Specimen of living *Opuntia* from Washington (50439).
- BELLE, JESSE, Passagrille, Fla.: Beetles (50920).
- BENEDICT, J. E., jr., Woodside, Md.: Snake, *Eutænia*, from Maryland (50460).
- BENEDICT, R. C., Bronx Park, N. Y.: 6 plants from South America (51310).
- BENSON, Major H. C., U. S. Army. (See under Yellowstone National Park.)
- BERGER, A., La Mortola, Italy: 4 specimens of living *Cerei* from Italy (50440).
- BERLIN (DAHLEM) GERMANY, KÖNIGL. BOTANISCHER GARTEN UND MUSEUM: 15 living specimens of cacti, representing 4 species (50322); part of the type of *Hemitelia costaricensis* (51102: exchange); living specimen of *Cereus* (51119: exchange); 4 fragments of ferns (51259: exchange).
- BERTONI, Dr. A. DE WINKELREID, Puerto Bertoni, Paraguay: 78 insects, mostly Hymenoptera, and partly named (50533).
- BIEDERMAN, C. R., Palmerlee, Ariz.: 4 specimens of insects representing the species *Euphoria leucographa* (50595).
- BINNER-WELLS COMPANY, Chicago, Ill.: 8 sheets of process color printing (50345).
- BIRKMANN, Rev. G., Lexington, Tex.: 134 specimens of Hymenoptera (51053).
- BIXLER, B. M., Stockton, Cal.: 6 clay objects excavated on the banks of the Amacusac River, State of Morelos, Mexico (51046).
- BLACK, Lieut. FRED. F., U. S. Army, Fort D. A. Russell, Wyo.: Specimens of fossils collected principally in the vicinity of Santiago, Cuba (51070).
- BLACK-GRIGNARD LITHOGRAPHIC COMPANY, New York City: 19 specimens of process color printing (50337).

- BLACK, HON. JOHN C., Washington, D. C.: Specimens of antique pottery excavated from the high land at Fort Bayard, N. Mex., under the direction of Lieut. Stephen Abbot, U. S. Army (51548).
- BLACKISTON, A. H., Cumberland, Md.: Archeological material consisting of copper bells, whistles, etc., from Honduras and Guatemala (51414); Egyptian collection consisting of 4 blue effigies, 3 bronze and 1 wooden effigies, 2 pottery vases, a small box of wheat, and a tablet; also 2 fragments of pottery from Cave Valley, Chihuahua, Mexico (50466). Loan.
- BLAIR, GIST. (See under Mrs. Virginia L. W. Fox, heirs of.)
- BLAISDELL, DR. FRANK E., San Francisco, Cal.: About 50 specimens of Coleoptera from California (50614: exchange).
- BLAKE, C. S., Bushey, Herts, England: A specimen of and 2 photographs of *Beaucarnea recurvata* (50450).
- BLANDIN, MRS. MARY C., Glenarm, Md.: An "Apostle" pitcher (51114: loan).
- BLUMER, J. C., Tucson, Ariz.: 7 specimens of *Castilleja* from Arizona (51133); 16 plants from Arizona (51212); 2 specimens of *Castilleja* collected in Arizona (51615).
- BOGDAHN, MISS ELMA, Washington, D. C.: Native silk worm moth, *Telea polyphemus* (50493).
- BOTANISK MUSEUM. (See under Copenhagen, Denmark.)
- BOYD, LUCIUS J., Three Bridges, N. J.: Specimen of hellgrammite fly, *Corydalus cornuta* (50384); specimen of *Balaninus nasicus*, the larvæ of which live in acorns (50529); specimen of northern mole cricket, *Gryllotalpa borealis* (50927).
- BOYSEN, A., Wheatley, Ark.: Snakes from Arkansas (50712).
- BRADFORD, EUGENE, Bruceville, Cal.: 2 specimens of insects (50791).
- BRADFORD, CAPT. JAMES LEWIS, New Orleans, La.: Fragmentary human bones, stone tablet, and pottery from St. Francis County, Ark. (51480).
- BRADLEY, EDSON, Washington, D. C.: A collection of brocades, cloth-of-gold, and cut velvets (51643: loan).
- BRAENDLE, FRED. J., Washington, D. C.: Salamander, *Spelerpes ruber*, from the District of Columbia (50521).
- BRANDEGEE, T. S., Berkeley, Cal.: 24 ferns from Mexico (50605; 50981; 51043); 8 plants from Mexico (50928); 527 plants collected in Mexico by Dr. C. A. Purpus (51274: 500 a purchase; 27, gift); 35 specimens of Mexican ferns collected by Dr. Purpus (51442).
- BRANNER, DR. J. C., Stanford University, Cal.: 3 specimens of land shells from South America (50639).
- BRANSON, E. B., Oberlin, Ohio: Fossil plant (51641).
- BRAZIL, DR. VITAL, São Paulo, Brazil: Snakes from Brazil (50465).
- BREDALL, MRS. ELISE, Akron, Iowa: 3 specimens of *Laciniaria* (50514); 4 plants from Iowa (50571).
- BREEN, MISS M. C., Agricultural College, Miss.: Specimen of narrow-mouthed toad, *Engystoma carolinense* (51731).
- BRIDGMAN, HERBERT L., New York City: "The Herbert L. Bridgman"—one of the four sledges used by Commander Robert E. Peary, U. S. Navy, on his recent trip to the North Pole; also a pick and a pair of snow-shoes (51341).
- BRINTON, CALEB R., Brinton, Va.: Schist carrying mispickel and iron pyrites (50455).
- BRITISH COLUMBIA, BIOLOGICAL STATION, DEPARTURE BAY (through Dr. Charles B. Wilson): Parasitic copepods from Nanaimo (50909).
- BRITISH MUSEUM (NATURAL HISTORY). (See under London.)
- BROADWAY, W. E., Tobago, West Indies: 100 plants from Trinidad (50412); 4 living specimens of *Phyllocactus* from Tobago (50719); 3 specimens of *Phyllocactus* from Tobago (50858); 7 living and dried plants from the West Indies (51028); 5 living specimens of Cactaceæ from Tobago (51123). Purchase.

- BROADWELL, W. H., Newark, N. J.: 4 specimens of Lepidoptera (51452).
- BROOKLYN INSTITUTE OF ARTS AND SCIENCES, Brooklyn, N. Y.: Specimen of batrachian representing the species *Pipa americana* (50821); specimen of crab representing the species *Platypodia granulosa* (51541: exchange).
- BROOKS, FRED. E., French Creek, W. Va.: 5 parasitic Hymenoptera: *Macrocentrus* n. sp., *Glypta* n. sp., and *Pimpla marginatus* (= *P. annulipes*) (50754); specimen of Hymenoptera representing the species *Pristomeridia agilis* (51169).
- BROWN, AUBREY, Evergreen, Ala.: Larva of a moth representing the species *Ceratomyxa regalis* (50942).
- BROWN, E. J., U. S. National Museum: Specimen of white-throated sparrow, *Zonotrichia albicollis*, from Virginia (51228); 60 birds collected at Smiths Island, Virginia (51563); 5 mammals from the vicinity of Washington, D. C. (51696).
- BROWN, HERBERT, Tucson, Ariz.: Skin of a rattlesnake from Arizona (50586); horned lizards from Arizona (50843); specimen of cactus, *Opuntia*, from Arizona (50969).
- BROWN, Miss LOUISA, New York City: Examples of early silk industry in the United States (50680).
- BRUSSELS, BELGIUM, JARDIN BOTANIQUE DE L'ÉTAT: Specimen of plant, *Hemitelia*, from Mexico (51168); 22 specimens of ferns (51617). Exchange.
- BRUSSELS, BELGIUM, MUSÉE ROYAL D'HISTOIRE NATURELLE DE BELGIQUE: Isopods, extra-European (51203: exchange).
- BRYANT, OWEN, Cohasset, Mass.: First duplicate series of Medusæ collected by the donor on the cruise to Labrador, 1908 (50327); collections of animals, plants, minerals, and anthropological objects from Java (50556; 50706; 50773; 50788; 51527: collected for the Museum).
- BRYANT, OWEN and JOHN, Cohasset, Mass.: About 300 insects from Labrador (50623).
- BUENOS AIRES, ARGENTINA, MUSEO ETHNOGRÁFICO DE LA FACULTAD DE FILOSOFÍA Y LETRAS, UNIVERSIDAD NACIONAL DE BUENOS AIRES (through Dr. Juan B. Ambrosetti, director): 319 Argentine archeological and ethnographical specimens (51680: exchange).
- BUFFALO SOCIETY OF NATURAL SCIENCES, Buffalo, N. Y.: Cast of a boat-shaped amulet found in Sabine County, Tex. (50399).
- BULAWAYO, RHODESIA, BRITISH SOUTH AFRICA, RHODESIA MUSEUM: 15 mammals, minerals, and rocks from Rhodesia (50607; 51107). Exchange.
- BULLEN, G. E., Hertfordshire County Museum, St. Albans, England: 70 microscopic slides of British hydroid zoophytes (51537: purchase).
- BUSH, B. F., Courtney, Mo.: 109 specimens of *Cratægus* from Missouri (50537: purchase); 6 living specimens of *Opuntia* from Arkansas (50656); living specimen of *Opuntia* from Missouri (50683); 91 specimens of *Cratægus* collected in Missouri by E. J. Palmer (51185: purchase).
- BUTTON, FRED. L., Oakland, Cal.: 2 specimens of *Ocinebra* from the west coast of America (50746); specimens of marine shells from Peru, collected by the late Perry Simons (51355).
- CALIFORNIA, UNIVERSITY OF, Berkeley, Cal.: Part of the type of *Pisonia flavescens* (51048); 2 plants from Mexico (51061: exchange).
- CAMBRIDGE, MASS., MUSEUM OF COMPARATIVE ZOOLOGY: Cotypes of 11 species of *Anoles* from the West Indies (50886: exchange); 27 specimens of Lepidoptera (50891); 24 skins of *Selasphorus* (51090: loan); 384 skins of Trogons (51268: loan); 2 specimens of echinoids representing the species *Arxosoma thetides* (51426: exchange); 1,197 skins of woodpeckers, Picidæ (51602: loan).
- CAMPBELL ART COMPANY, Elizabeth, N. J.: 32 prints by the photo-gelatin process (50342).

- CAMPBELL, HUGH E., Seligman, Ariz.: Specimen of wheel-bug, *Arilus cristatus* (50548); specimen of horned lizard from Arizona (50559).
- CAMPBELL, J. W., Portland, Oreg.: A specimen of coprolite (51345).
- CAMPBELL, W. D., South Perth, Western Australia: 9 complete individual obsidian bombs and one fragment from Bulong and Broad Arrow, near Kalgoorlie Central Gold Field, Western Australia (51234: purchase).
- CANNON, Prof. GEORGE L., Denver, Colo.: 50 specimens of Paleozoic fossils, including one type (50609).
- CAPITOL, UNITED STATES (Elliott Woods, Superintendent): Plaster replica of the full-sized model prepared by L. Amateis for the bronze doors at the west entrance to the Capitol building (50980).
- CARD, GEORGE W., Geological Survey, New South Wales, Sydney, Australia: 6 specimens of obsidianites from South Australia (51103).
- CARNEGIE INSTITUTION, Washington, D. C. (through Dr. D. T. MacDougall): Living specimen of cactus, *Opuntia*, from the vicinity of Tucson, Ariz. (51493).
- CARNEGIE MUSEUM, Pittsburgh, Pa.: Skins of 18 humming birds from tropical America (50738: loan); 17 skins of Trogons (51318: loan); 603 skins of woodpeckers (51580: loan); a collection of the fishes of British Guiana (51656: exchange).
- CARR, CHARLES F., New London, Wis.: Specimen of hybrid between a canary and a European goldfinch (50983).
- CARRICO, E. T., Stithon, Ky.: 3 snakes from Kentucky (50325).
- CARTER, JOEL J., Peters Creek, Pa.: Specimen of *Asplenium* from Pennsylvania (50502).
- CASEY, Col. THOMAS L., U. S. Army, Washington, D. C.: Insects, reptiles, and crustaceans from the Island of San Clemente, off the coast of southern California (50326).
- CAUDELL, JOHN, Demorest, Ga.: Specimen of *Megarhyssa atrata* (50941).
- CESKO-SLOVANSKE NARODOPISNÉ MUSEUM (Musée Ethnographique Tchéquo-Slave). (See under Prague, Bohemia.)
- CHADWICK, Miss JULIA, Washington, D. C.: 28 pieces of lace and embroidery, and a carved ivory fan (51664); a collection of laces, Hispano-Moresque plaques and vases, Brower ware and other ceramics; also an oil painting entitled "The Lace Maker" (51728). Loan.
- CHAFFEE, T. S., Turjillo, Honduras: Specimen of cotton which grows in Honduras (51487).
- CHAFFEY, E., Mazapil, Zacatecas, Mexico: Specimen of *Opuntia* from Mexico (51578); 27 living specimens of Cactaceæ from Zacatecas (51660, 51673).
- CHAGNON, G., Montreal, Canada: 7 specimens of Lepidoptera (51359).
- CHAMBERLAIN, CHARLES J., University of Chicago, Ill.: Specimens of sporophylls and ovules of *Dioon*, collected in Mexico (50732).
- CHAMBERS, W. LEE, Santa Monica, Cal.: 3 eggs, one set, of *Larus heermanni* (50377).
- CHAPMAN, R. H., Canadian Geological Survey, Ottawa, Canada: Model of the city of Butte (51340).
- CHAPMAN, W. HUSE, New York City: Negro skull, a pamotac and 2 flagellation instruments (51651: purchase).
- CHARNLEY, WALTER, Nueva Casas Grandes, Chihuahua, Mexico: 3 small clay heads from Panuca, Mexico, and an old skull from the State of Vera Cruz (51250).
- CHITE, SALVATORE, Washington, D. C.: Volcanic material from Mount Etna, Italy (50735: purchase).
- CHITTENDEN, Capt. NEWTON H., Brooklyn, N. Y.: Skull of flat-head Indian; 2 head-flattening pillows and a hunting shirt of a half-breed Cree Indian (51082).

- CHRIST, Dr. H., Basel, Switzerland: 2 plants from Costa Rica (50771); specimen of fern representing the species *Hemitelia mutica*, from Costa Rica (51161). Exchange.
- CLARK, BURTON W., Business High School, Washington, D. C.: Slab of Oneida sandstone with fucoidal remains (50594).
- CLARK, H. W., Bureau of Fisheries, Washington, D. C.: 3 plants from Indiana (50724); specimen of plant, *Strophostyles helvola*, from Indiana (50726); specimen of *Quercus* from Indiana (50833).
- CLARK, J. WANTON, Washington, D. C.: Peruvian-Spanish saddle of 1850 (51540).
- CLEMENS, Rev. JOSEPH, Fort Douglas, Utah: 235 plants from the Philippine Islands (50431); ethnological material collected from the Lanao tribes of the Mohammedan Moros, Mindanao, P. I. (50914). Purchase.
- COBHAM, HENRY, Warren, Pa.: Casts of a bird-shaped amulet found on a farm 2 miles east of the confluence of the Allegheny and Conewango rivers, Pa. (50426).
- COCKERELL, Prof. T. D. A., Boulder, Colo.: A collection of insects from Europe (50648); 35 insects from Boulder (50962); hymenopteron of the genus *Megastigmus* (50963); about 50 insects, including cotypes of several species of bees (51214); 20 insects (51332); insects including part of type material of *Rhopalomyia graphalodis* (51621); 22 specimens of insects (51727).
- COE COLLEGE, Cedar Rapids, Iowa: 2 skins of *Spiza americana* (50967: loan).
- COLBURN, ALBERT E., Los Angeles, Cal.: 2 birds' eggs, one set, from Mexico (51466).
- COLE, F. R., Claremont, Cal.: Specimens of minerals (51508).
- COLE, Dr. LEON J., University of Wisconsin, Madison, Wis.: 27 lots of Pycnogonids from the vicinity of Woods Hole, Mass. (51410); land shells from Peru, collected by Dr. Hiram Bingham (51677).
- COLLIER, Mrs. ARTHUR JAMES, Washington, D. C.: 4 pieces of Brussels point lace (51575: loan).
- COLLINS, F. S., Malden, Mass.: 50 specimens of North American Phycotheca (50946: purchase).
- COLOMBO, CEYLON, THE MUSEUM (through J. A. Daniel, principal mineral surveyor): 61 specimens of rocks (50734: exchange).
- COLONIAL WARS, STATE OF NEW YORK SOCIETY, New York City: Souvenir plaque of the "Colonial Washington," made by James E. Kelly, after "Peale" (50889).
- COLONNA, B. A., Washington, D. C.: Rude stone axe from the vicinity of Anacostia, D. C. (51263).
- COMMERCE AND LABOR, DEPARTMENT OF:
Bureau of Fisheries: Tooth of a Mastodon obtained by J. F. Boepple, Cannelton, Ind., from the Ohio River bank near Vevay, Ind. (50287); first series, including type, of a new *Sibogita* from the Gulf Stream, obtained by Dr. Henry B. Bigelow, on the U. S. Fisheries schooner *Grampus* during the summer of 1908 (50328); 17 specimens of plants collected by H. Walton Clark in the vicinity of Lake Maxinkuckee, Ind. (50584); specimen of plant representing the species *Strophostyles* from Indiana (50668); 5 specimens of *Notropis hudsonius selene* from Lake of the Woods (50672); 2 marine turtles from the Paumotu Archipelago, obtained by the Albatross in 1899-1900 (50739); shrimps *Spirontocaris polaris*, from the stomach of a cormorant taken at St. George Island, Bering Sea (50749); types of three species of Cyprinidae, namely, *Notropis universitatis* from Boulder Creek, collected by Prof. T. D. A. Cockerell; *Richardsonius thermophilus* from Warm Springs, Harney County, Oreg., collected by John O. Snyder for the U. S. Bureau of Fisheries, and *Notropis kendalli* from Cross Lake Thoroughfare, Me., collected by Dr. W. C. Kendall for the Bureau of Fisheries (50818); specimen of black poll warbler, *Dendroica striata* (50823); parasites (*Halarachne*),

COMMERCE AND LABOR, DEPARTMENT
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taken from the trachea of a fur seal pup, St. Paul Island, by Assistant Fur Seal Agent James Judge (50838); a large specimen of brain coral from Porto Rico (50863); 6 bumblebees from St. Paul Island, Pribilof group, Alaska (50866); human bones dug out of the sand near the outlet of Lake Maxinkuckee, Ind. (50878); worm parasites of fishes, seals, and birds, collected at Seal Islands by H. D. Chichester (50882); 22 lots of parasitic copepods obtained during the cruises of the Albatross in 1904 and 1906, also from Woods Hole, Mass., and other localities (50911); (through Dr. C. H. Townsend, New York City): A collection of birds' skins, birds in alcohol, and a bird skeleton, collected on various islands of Polynesia by Dr. Townsend while naturalist with the steamer Albatross (50936); fresh-water sponge representing the species *Ephydatia japonica*, from the Eastern Branch of the Potomac River, obtained by Lewis Radcliffe and A. C. Weed (50961); specimens of bird lice, *Menopon* sp., from St. Paul Island, Alaska (50966); 4,526 specimens of small fishes collected during the summer of 1909 in Back Creek and Opequon Creek valleys, W. Va. (51150); larva of a salamander, *Amblystoma*, collected in a small lake at Irwin, Colo., by H. I. Miller (51181); 7,147 specimens of ophiurans from the Japanese cruises of the Albatross in 1900 and 1906 (51241); collection of Japanese fishes, representing 20 species, made by the Albatross in 1906 (51346); echinoids and alcyonarians from Albatross expedition in the Pacific Ocean (51381); fishes collected in the Great Lakes and Lake of the Woods by Dr. S. E. Meek in 1908 (51417); 95 lots of Pycnogonids collected by the Albatross in the northwest Pacific in 1906, off the coast of southern California in 1904, and in the Hawaiian Islands in 1902 (51427); 5,630 specimens of fishes collected by Messrs. Evermann and Clark in Lake Maxinkuckee and vicinity, Indiana, in 1899 and 1900 (51430); type specimens of *Etheostoma*

COMMERCE AND LABOR, DEPARTMENT
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hildebrandti and *Notropis reticulatus*, the former from Fletcher Lake, near Logansport, Ind. (51432); fishes from Franklin County, Ohio, collected by Messrs. R. C. Osburn and E. B. Williamson in 1897; from the Canal Zone, collected by A. H. Jennings in 1909; and from the Lake of the Woods Basin, Minn., collected by A. J. Woolman, in 1894 (51447); 5 specimens of Pycnogonida representing 3 species, collected by the Albatross during the East Pacific Expedition of 1904-5 (51467); 42 lots of parasitic copepods, Ergasilidae (51477); a small collection of fossils from Kentucky, and another of geodes, collected by J. F. Boepple (51486); 6,876 specimens of fishes consisting chiefly of collections made in the Great Lakes Basin by A. J. Woolman in 1893, and by Dr. J. T. Scovell, D. C. Ridgley, Drs. Evermann, Gurley, and Bean, Cloudsley Rutter, and Dr. P. H. Kirsch in 1894 (51503); a miscellaneous collection of fishes comprising 5,093 specimens (51510); about 200 specimens of Isopods from the Philippine Islands (51551); collections of fishes, made by the Albatross on the Agassiz South Pacific Expedition, 1899-1900, consisting of 1,297 specimens including duplicates (51552); fishes collected by Dr. Tarleton H. Bean on Long Island in 1898 (51558); fishes collected by the Agassiz Eastern Pacific Expedition of 1904-5 (51565); miscellaneous lot of about 8,324 fishes from various localities (51612); sponges from the Philippine Islands, type of *Spongilla microsclerifera* (51628); Philippine reptiles and batrachians, and one loose carapace (51715); mouse, *Mus*, from Talisse Island (51721).

COMSTOCK, Prof. F. M., Cleveland, Ohio: Manuscript notes, drawings, plates, lantern slides, microscopic slides, etc., which belonged to the late Dr. C. M. Vorce (51303).

CONLEE, C. C., Memphis, Tenn.: 2 photographs of a kinkajou, *Potos caudivulvovus* from Louisiana (50308: purchase).

- CONSTANDENETHOS, GEORGIUS, Brooklyn, N. Y.: 38 Venetian and Byzantine coins (51530); antique Greek embroideries and costumes (51554: purchase).
- CONZATTI, Dr. C., Oaxaca, Mexico: 34 plants from Mexico (50434); 3 living specimens of Crassulaceæ from Mexico (50550); 9 living specimens of *Mamillaria* from Mexico (50685; 50694; 50783); specimen of cactus, *Echinocactus*, from Mexico (51231); specimen of *Opuntia filifera*, from Oaxaca (51685); specimen of *Nopalea* from Mexico (51695); 3 living specimens of Cactaceæ from Oaxaca (51704).
- COOK, MEL T., Newark, Del.: 5 plants from Delaware (50507; 51521).
- COOK, Dr. O. F., Department of Agriculture, Washington, D. C.: 2 specimens of Isopod from Guatemala, types of a new species (50830).
- COOKE, Miss J. M., Point Loma, San Diego, Cal.: 2 specimens of *Dentalium* from the Gulf of California (50885).
- COOLIDGE, Mrs. H. B., Washington, D. C.: A lace berthä (51710: loan).
- COOPER, JOHN M., Washington, D. C.: Egg of a loon, *Gavia immer*, from Canada (51702).
- COPENHAGEN, DENMARK, BOTANISK MUSEUM: 3 Mexican ferns (50931); 2 fragmentary specimens of Brazilian ferns (51160); 9 specimens of ferns from Mexico (51298). Exchange.
- COPENHAGEN, DENMARK, ZOOLOGICAL MUSEUM (through Dr. Th. Mortensen): 3 pentacrinoids of *Hathrometra proluxa* from East Greenland (51246: exchange).
- CORBIN, Mrs. H. C., Washington, D. C.: 5 articles of silverware, and a number of ethnological objects from the United States, the Philippine Islands, Australia and the Far East (51547: loan).
- COREY, JOHN M., Saratoga Springs, N. Y.: Stone implements and pottery fragments collected by the donor on the shore of Lake Saratoga (50938).
- CORNELL UNIVERSITY, ITHACA, N. Y. (through Prof. Burt G. Wilder): 13 salamanders from New York (50900: exchange).
- COSENS, A., Toronto, Canada: 8 specimens of Hymenoptera (51500).
- COSGRAVE, F. V., Chicago, Ill.: Specimen of *Diapheromera femorata* (50786).
- CRAFT, Dr. C. C., Washington, D. C.: Decapods from the North Atlantic Ocean (51297).
- CRANE, Mrs. W. MURRAY, Washington, D. C.: 5 pieces of brocades and drawn work of the 16th and 17th centuries (51200: loan).
- CRIDDLE, NORMAN, Treesbank, Manitoba, Canada: 6 mosquitoes (51164).
- CROKER, A. J., Victoria, British Columbia: 268 specimens of Microlepidoptera (50918; 51130). Exchange.
- CROMWELL, DAVID W., Piermont-on-Hudson, N. Y.: 56 uncanceled postage stamps of the 1909 issue (50542: loan).
- CRUISE, FRED., Olin, Iowa: Copperspearhead found in the vicinity of Elwood, Iowa (51600: purchase).
- CRUM, Dr. M. L., Bowling Green, Fla.: Specimen of the fig eater, *Allorhina nitida* (50381).
- CUMLEY, Mrs. C. F., Terminal, Cal.: Specimens of *Crenella columbiana* from San Pedro Harbor, Cal. (51421); specimens of *Rochefortia pedroana* and *Nucula suprastrata* from San Pedro Bay, Cal. (51543).
- CURL, Dr. H. C., U. S. Navy, Cavite, P. I.: 64 birds' skins from the Philippine Islands (51423).
- CURTIS, Mrs. WILLIAM E., Washington, D. C. (through Mrs. James W. Pinchot): Handkerchief of "Nanduty" lace made in Paraguay from the fibre of a tree, and a handkerchief made in Venezuela (51712: loan).
- CUSICK, WILLIAM C., Union, Oreg.: 5 specimens of *Juncus* collected in Oregon (50834).

- CUTHBERT, A., Augusta, Ga.: 6 plants from the southern part of the United States (51598).
- DAHLEM, GERMANY, KÖNIGL. BOTANISCHER GARTEN UND MUSEUM. (See under Berlin, Germany.)
- DALLAS MINING COMPANY, Coalinga, Cal.: Specimen of benitoite, with neptunite, on matrix from Coalinga (51688).
- DANIEL, J. A. (See under Colombo, Ceylon.)
- DARLING, Miss NANCY, Woodstock, Vt.: 15 specimens of a plant representing the species *Lycopodium sabinæfolium* from Vermont (51308: exchange).
- DAVIDSON, Dr. A., Los Angeles, Cal.: 97 plants from California and the Southwestern States (50427; 50449; 50667).
- DAVIS, C. I., Seattle, Wash.: 2 baskets made by Tulare Indians (50925: purchase).
- DAVIS, WILLIAM T., New Brighton, N. Y.: 5 specimens of Orthoptera (50842).
- DAVIS, W. W., Washington, D. C.: 3 specimens of fossil shells from Virginia (50391).
- DAY, Dr. DAVID T., U. S. Geological Survey, Washington, D. C.: A large quantity of black sand from the Pacific coast (51071).
- DEAM, C. C., Bluffton, Ind.: 23 living plants, chiefly cacti, from Guatemala (50296); 16 specimens of cacti from Guatemala (50333: exchange); shrimps from Gualan River, Gualan, Guatemala (50348); 23 ferns from Guatemala (50654); 171 sheets of plants from Guatemala (50671); 9 packets of seeds from Guatemala (51388: exchange).
- DEAN, F. A. W., Alliance, Ohio: 8 bank notes and two early English publications containing the court proceedings in the trial of Sir John Friend, and the address of the Queen to Parliament (50452).
- DEANE, WALTER, Cambridge, Mass.: Specimen of plant, *Euphorbia cyparissias*, from New Hampshire (51147).
- DEEDMEYER, FRANK, American Consul, Charlottetown, Prince Edward Island, Canada (through Department of State): 2 stone axes from the Micmac Indian tribe of Prince Edward Island (51576).
- DEMAREST, J. H., Soldiers' Home, Cal.: Specimen of *Nicotiana glauca* from California (50758); specimen of Orthoptera, *Stenopelmatus fuscus* (51091).
- DEPUY, A. B., Collingswood, N. J.: 5 specimens of minerals (50390: exchange).
- DE RIEMER, Rev. WILLIAM E., U. S. National Museum: Model of a Hindu temple (51625: purchase).
- DERRICK, J. F., Cherry, Ariz.: Cocoon of a basket-worm belonging to the genus *Oiketicus* (51306).
- DIDLAKE, MARY, Lexington, Ky.: Specimen of *Verbena canadensis* (50360).
- DILLINGHAM, Mrs. HAROLD, Mrs. Baldwin Wood, and the Misses Alice and Henrietta Smith, San Francisco, Cal.: A collection of ladies' and gentlemen's wearing apparel of the colonial period, which had been deposited in the Museum in 1905 by Miss Margaret Bayard Smith (51406).
- DODE, L. A., Paris, France: Seeds of *Carya diguetii* from Mexico (51139).
- DODGE, BYRON E., Davison, Mich.: A stone hatchet (51148: loan).
- DODGE, Mrs. K. T., Washington, D. C.: Ethnological objects of the American Indians (50291: loan).
- DUDLEY, Mrs. CHARLES TARBELL, Washington, D. C.: 33 pieces of pottery from Central and South America (51320: loan).
- DUERDEN, Prof. J. E., Albany Museum, Grahamstown, Cape Colony, South Africa: 14 specimens of Silurian corals from the Island of Gotland (51128).
- DUGÈS, Prof. ALFRED, Guanajuato, Mexico: Specimen of *Carpodacus frontalis* in abnormal plumage (50839).
- DUNWOODY, Gen. HENRY H. C., U. S. Army (retired), Washington, D. C.: Specimen of cerussite from Bennett-Stephenson Mine, Don Ana County, N. Mex. (50312).

- EASTMAN COMPANY, Rochester, N. Y.: 2 portraits of a lady on Eastman platinum paper, and 4 portraits of a girl on Royal Nepera paper (51469).
- EATON, W. C., Medina, N. Y.: Skull and bones taken from Indian burial pit at Gasport, N. Y.; also photographs of the locality (50365).
- ECKERT LITHOGRAPHING COMPANY, Washington, D. C.: 30 examples of process color printing (50363; 50588).
- EDISON, FRANK, Kelton, Utah: A series of specimens of variscite and associations (50647).
- EDWARDS, J. S., Detroit, Mich.: 8 photographs of snakes and a small zoological chart (51067); snake skin shed by *Python molurus* (51112); 4 eggs of Python (51208).
- EGGLESTON, W. W., New York Botanical Garden, New York City: 209 specimens of *Cratægus* (50733: purchase).
- EHRHART, WILH., Joinville, St. Catharina, Brazil: Fishes from the Rio Humboldt, Brazil, and reptiles from South America (51483: purchase).
- EICHLAM, FEDERICO, Guatemala, Guatemala: 76 living cacti from Guatemala (50419: exchange).
- ELLIOTT, R. M., Washington, D. C.: English verge watch movement (50472).
- ELLIS, Miss CHARLOTTE C., Placitas, N. Mex.: 2 living specimens of Cactaceæ from New Mexico (51120).
- ELLIS, Miss NANNIE KENT, Lynchburg, Va.: Old sword of Scotch make, with a basket hilt (50473: loan).
- ELLISON, Miss M. B., Richmond, Va.: Specimen of *Clerodendron thompsonæ* (50488).
- EMBODY, GEORGE CHARLES, Cornell University, Ithaca, N. Y.: Set of 3 eggs of Bachman's warbler, from Kentucky (51223); 6 specimens of Amphipods, types of *Eucrangonyx serratus*, from Ashland, Va. (51290).
- ENDICOTT, J. B., Cañon City, Colo. (through D. B. Sterrett, U. S. Geological Survey): A cut agate (St. Stephen's stone) from Colorado (51118).
- ENFIELD POTTERY AND TILE WORKS, Enfield, Pa. (through J. H. Dulles Allen): Reproductions of seven antique terra cottas (51179: exchange).
- ENGELHARDT, GEORGE P., Children's Museum, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.: 78 specimens of Orthoptera from Guatemala (50837: exchange); 13 specimens of insects, Forficulidæ, from Guatemala (51062).
- ENSLIN, Dr., Fürth i. B., Germany: 62 specimens of sawflies (51398: exchange).
- ERDIS, ELLWOOD C., Chihuahua, Mexico: 2 snake skins from Mexico (51603).
- ESHNAUR, Mrs. E. L., Terminal Island, Cal.: 7 species of marine shells from San Pedro, Cal. (51074).
- ESTEP, Mrs. E. W., Casey, Ill.: Ethnological specimens from Hawaii, including an idol, poi pestle, kukui (stone lamp) and a tapa quilt (50331: loan).
- ESTERLY, Mrs. GEORGE MAX, Seattle, Wash.: Specimens of copper from placer gold mines on the Chittitu Creek in the Nezina Mining District of Alaska (50578).
- EVANS, JOHN D., Trenton, Ontario, Canada: 28 specimens of Lepidoptera (51249).
- EVANS MARBLE COMPANY, Knoxville, Tenn.: 2 six-inch marble cubes (51624).
- EVANS, WILLIAM T., New York City: 100 oil paintings by American artists (50841).
- EVERMANN, Dr. B. W., Bureau of Fisheries, Washington, D. C.: 577 plants from the United States (51585); fishes from Indiana collected at various times during the years 1887 to 1899 by Dr. Evermann, Mr. D. C. Ridgley, Mr. W. S. Blatchley, Mr. C. S. Hoover, Mr. W. E. Clapham, Dr. J. T. Scovell, Prof. U. O. Cox, Dr. C. H. Copeland, Mr. J. E. Cunningham, Mr. A. J. Woolman, and Prof. P. N. Kirsch (51630).
- EWELL, Dr. MARSHALL D., Chicago, Ill.: An old Spencer microscope stand (50311).

- FAIRCHILD, Miss ANNA R., Paris, France: 12 pieces of lace and 7 fans which had belonged to Miss Julia S. Bryant, daughter of William Cullen Bryant (51162).
- FASSL, A. H., Cali, Colombia, South America: 36 specimens of Mantidæ (50492: purchase).
- FEARING, Col. DANIEL B., Newport, R. I.: Reproduction of Izaak Walton's will with script copy of the same, and of a note in Izaak Walton's handwriting with script copy (50346).
- FEATHERSTONHAUGH, Dr. THOMAS, Washington, D. C.: A stem-winding aluminum watch and 153 watch movements (51235; 51251).
- FENKEL, N. C., Erie, Pa.: Specimens of *Bythinia tentaculata* taken from water pipes in Erie (50637).
- FERGUSON, Miss PERCY, Biloxi, Miss.: Larva of a moth, probably *Tineola uterella* (50528).
- FIELD, GEORGE H., San Diego, Cal.: About 20 specimens of Lepidoptera (51165).
- FIELD MUSEUM OF NATURAL HISTORY, Chicago, Ill.: 2 specimens of Colombian squirrels, *Sciurus saltuensis bondeæ* (50643: exchange); fern from Trinidad (51256: exchange); 47 skins of Trogons (51289: loan); 2 plants from Arizona (51309: exchange); 122 specimens of plants, mainly from Illinois (51473: exchange); 447 birds' skins (51647: loan).
- FINK, WILLIAM, Berwyn, Md.: Specimen of shrew, *Microsorex*, from Berwyn (51152).
- FISHER, GEORGE L., St. Thomas, Ontario, Canada: 39 plants from North America (51145).
- FLEMING, E. B., Port Angeles, Wash.: Egg of domestic fowl, of abnormal shape (51372).
- FLEMING, J. H., Toronto, Canada: 12 birds' skins, *Hypothymis* (50503: loan).
- FLINT, Dr. JAMES M., U. S. Navy (retired), Washington, D. C.: 3 Japanese musical instruments (50313).
- FOERSTER, Prof. F., Bretten, Baden, Germany: 3 skins of birds of paradise (51590: purchase).
- FOOTE MINERAL COMPANY, Philadelphia, Pa.: 5 specimens of minerals (51315); a specimen each of sphalerite, blomstrandite, and carnotite (51597). Purchase.
- FORBES, Dr. S. A., Urbana, Ill.: 7 specimens, cotypes of *Notropis anogenus*, collected at McHenry, Ill. (50933).
- FOREST, FISH, AND GAME COMMISSION, New York City: Fishes collected in Salubria Lake, N. Y., by Henry Davidson, 1909 (51083).
- FORRESTER, ROBERT, Salt Lake City, Utah: 2 fossil teeth from Utah (50776).
- FOSTER, A. S., Goldendale, Wash.: Sponges, hydroids, and bryozoans (50597); 29 specimens of cryptogams from Washington and Oregon (51474).
- FOX, Dr. CARROLL, Washington, D. C.: Specimen of ground squirrel from Nagai Island, Alaska (50943); types of four species of fleas (51393).
- FOX, Mrs. VIRGINIA L. W., heirs of (received through Mr. Gist Blair, Washington, D. C.): The Gustavus Vasa Fox collection of books, pictures, papers, panoramas, etc., illustrating Russian life and history; a bronze medal, etc. (50292).
- FRIC, V., Prague, Bohemia: Skeleton and skull of a gorilla (50541: purchase).
- FRIERSON, L. S., Frierson, La.: 4 specimens of *Quadrula leai* from China (51279).
- FRIESE, Dr. H., Schwerin in Mecklenberg, Germany: 43 specimens of bees (51588: purchase).
- GAGE, R. B., Geological Survey of New Jersey, Trenton, N. J.: 5 specimens of minerals from Canada and New Jersey (51283).
- GAHAN, A. B., College Park, Md.: 2 cotypes of *Cœlopisthia fumosipennis* (50948).

- GAILLARD, Col. D. Du B., U. S. Army, Culebra, Canal Zone: Seeds and palm nuts from the Canal Zone (50627; 50779); skin of a wildcat, *Felis jaguarundi* subsp. (50857); 10 specimens of fruits and flowers of the "arbol de Vela" from the Canal Zone (51328); 5 specimens of fruit and foliage of an ornamental tree from Panama (51351).
- GAILLARD, Mrs. D. Du B., Culebra, Canal Zone: Specimen of living cactus (50378); 5 specimens of Cacti from the Canal Zone (50628); specimen of plant, *Pereskia panamensis* (50740); 3 lots of seeds from the Canal Zone and 5 living plants from Panama (50847; 50895).
- GARDINER, J. STANLEY, Cambridge, England: 2 cotypes of new species of Brachiopods from the Indian Ocean Sealark expedition of the Sladen fund (50285); 806 specimens representing 245 species of crabs from the western Indian Ocean, collected by the same expedition in 1905 (51720).
- GARDNER, GEORGE H., Hunter, N. Y.: An eyeless chicken (51545).
- GARDNER, J. H., U. S. Geological Survey, Washington, D. C.: Barite concretions from New Mexico (51507).
- GARNEAU, J. GEORGE. (See under National Battlefields Commission.)
- GARRETT, A. O., Salt Lake City, Utah: 7 specimens of living Cactaceæ from Utah (50442); specimen of *Echinocactus simpsoni* from Utah (50518); 3 living specimens of *Opuntia fragilis* from Utah (50633); 8 living specimens of *Opuntia* from Utah (50658; 50798).
- GATCHELL AND MANNING, Philadelphia, Pa.: 19 sheets and pamphlets of process color prints (50344).
- GATLIFF, J. H., Carlton, Victoria, Australia: 6 specimens of marine shells from Australia (50984).
- GEISER, S. W., Independence, Iowa: Specimen of *Alasmidonta truncata* from Iowa (50485); 7 specimens of unios (50665); egg of king rail, *Rallus elegans*, from Iowa (51538).
- GEMMILL, Miss JANE W., Washington, D. C.: 3 Indian baskets (50602: purchase).
- GILBERT, Dr. C. H., Stanford University, Cal.: Specimen of porpoise, *Lagenorhynchus obliquidens* (51362).
- GILBERT, CHESTER G., South Bethlehem, Pa.: A piece of the "Lampa" meteorite, weighing 74 grams (51137: exchange).
- GILDER, ROBERT F., Omaha, Nebr.: Hoe made from the scapula of a buffalo, found at an old village site near Omaha (50978).
- GILL, Dr. THEODORE N., Smithsonian Institution: Photographs mainly of individuals associated with the early history of the Smithsonian Institution (50945); photograph of C. Tate Regan (51323); photograph of Robert Ridgway (51375).
- GIRAULT, A. A., Urbana, Ill.: Cotypes of 2 new genera and species of Hymenoptera (50531).
- GIRBAL, FREDERICK (through the Department of State): 2 fossil Mastodon teeth found in the San Pedro Sula Valley (50901).
- GODING, FREDERIC W., American Consul, Montevideo, Uruguay, South America (through the Department of State): Batrachians from Maldonado (51604).
- GOLDFINCH, S. H., Nakuru Station, British East Africa: Specimen of *Lophiomys* from a forest near Nakuru (51073).
- GONZALES, DOMINGO, Governor, Pueblo of Taos, N. Mex. (through Mrs. M. C. Stevenson): Ceremonial pipe from the Pueblo of Taos (51458).
- GONZALEZ, Rev. Father SATURIO, Santo Domingo de Silos, Provincia Burgos, Spain: 2 specimens of deer, *Cervus* (51723: purchase); a cat, *Felis catus* (51723).
- GOODE, Mrs. G. BROWN, Washington, D. C.: Tortoise-shell necklace with cameo pendant, 6 votive offerings, a relic with papal seal, and a pack of Italian playing cards (50707: loan).

- GOODELL, MRS. THOMAS D., New Haven, Conn. (through Mrs. James W. Pinchot): A piece of modern Greek lace, 12 inches long (51019).
- GRAHAMSTOWN, CAPE COLONY, SOUTH AFRICA, ALBANY MUSEUM (through Prof. J. E. Duerden): 6 turtles (51128½).
- GRANT, Col. C. C., Hamilton, Ontario, Canada: 15 specimens of fossils from the Niagara chert (51285).
- GRAVES, F. P., Doe Run, Mo.: 8 specimens of calcite from Missouri (51117).
- GRAVES, M. M., Somerville, Tex.: Fossil rhinoceros jaw (51136).
- GRAY, S. C., Deavertown, Ohio: Arrow point found in Deavertown (50664).
- GREEN, G. GORDON, Washington, D. C.: Specimen of Hemiptera from Tunky, Nicaragua (50624).
- GRIDLEY, MRS. ANN E., Washington, D. C.: A gold pin, and a handkerchief from the Philippine Islands (50433).
- GRIMES, WARREN W., U. S. National Museum: Bronze medal of the choir of the National Cathedral of SS. Peter and Paul, Washington, D. C. (51471).
- GRIFF, C. W., San Diego, Cal.: 2 specimens of *Terebra* from San Diego (50898); specimens of *Haliotis assimilis* from 15 fathoms off San Diego (50953); specimens of *Milneria kelseyi* and *Modiola opifex* from 10-15 fathoms at the entrance to San Diego Bay (51252); specimens of *Pholadidea* from San Diego (51397).
- GRONBERGER, S. M., Smithsonian Institution: 3 magazines and 2 color-process prints (51017); piece of the first Atlantic telegraph cable (1858) measuring 4 inches, with facsimile certificate of Cyrus W. Field (51040).
- GROSSBECK, JOHN A., New Brunswick, N. J.: 2 specimens of Lepidoptera (50923).
- GRUGAN, F. JUSTICE, Philadelphia, Pa.: A section of Shrewsbury meteoric iron, weighing 425 grams (51581: purchase).
- GULF BIOLOGIC STATION, Baton Rouge, La.: 4 specimens of shrimp, *Hippolyte pleuracantha* (50397).
- GULF BIOLOGIC STATION, Cameron, La. (through F. W. Weymouth, Stanford University, Cal.): Type and a cotype of *Leptocerdale longipinnis*, collected by M. H. Spaulding (51024).
- HALLOCK, CHARLES, Northampton, Mass.: 2 pictures of western prairie life (51196).
- HANCE, Estate of Dr. THEO. F. (through the Misses Eleanor W. and Emma Hance, Washington, D. C.): A melodeon (51376).
- HANNA, G. D., U. S. Geological Survey: Reptiles from Texas and a salamander from the District of Columbia (50709); alcoholic and dry specimens of *Bifidaria armifera* from Lawrence, Kans. (51270); specimen of turtle from Sheppards Ferry (51626).
- HANSEMANN, Prof. DAVID PAUL VON, Berlin, Germany: 16 anatomical specimens (51146; 51505). Exchange.
- HARLAN, BENJAMIN A., jr., Washington, D. C.: Specimen of native silver, probably from Mexico (50364).
- HARMON, WILLIAM, Glendive, Mont.: Black-footed ferret, *Putorius nigripes*, from Glendive (51194).
- HARNED, JOSEPH E., Oakland, Md.: 3 plants from Maryland (50612); specimen of *Pogonia ophioglossoides* from Maryland (50874); specimen of *Viola also-philha* (51586).
- HARPER, R. M., Tallahassee, Fla.: 96 plants from Georgia (50371: exchange).
- HARRELL, Dr. R. F., Alexandria, La.: Flint spearhead, flint arrowhead, shell scraper and fragments of human bones, from Mount Susan, Tex. (50486).
- HARRINGTON, M. R., Detroit, Mich.: A set of the primitive implements and utensils used by the New York Iroquois Indians in preparing corn for food (50579: purchase).
- HARRIS, EDWARD, Cumberland, Md.: Specimen of *Solidago* from Maryland (51687).
- HARRIS, GEORGE C., jr., Mont Helena, Miss.: Stone axes, flint implements, and pieces of broken pottery from Indian mounds near Mont Helena (50778).

- HARRIS, Dr. J. R., U. S. Army, Boise Barracks, Boise, Idaho: 2 musical instruments and a bamboo drinking cup (51709).
- HARRIS, Dr. J. V., Key West, Fla.: Specimen of cockroach, *Blaberus atropos* (50985).
- HARRIS, Q. P., Salem, N. J.: 5 glass beads from an Indian grave in the high Sierras of California (51129).
- HARRIS, THOMAS C., Baltimore, Md.: Small stone idol, small earthenware pot, and a fragment of a grotesque face broken from a vessel, from Ometepe Island, Lake Nicaragua (50453).
- HARRISON, Miss CARRIE, Washington, D. C.: A collar of old French embroidery (51060).
- HARSHBERGER, J. W., University of Pennsylvania, Philadelphia, Pa.: Specimens of *Talinum* from Mexico (51027).
- HARTMAN, Prof. FRANK A., Seattle, Wash.: Rattlesnake, *Crotalus willardi* from Arizona (51491).
- HARWOOD, J. H., Andrews, N. C.: Specimen of "solitary ant" or "velvet ant," *Mutilla occidentalis* (50512).
- HASSE, Dr. H. E., Sawtelle, Cal.: Specimen of living *Opuntia* from California (51488).
- HAWLEY, Mrs. E. A., Passagrille, Fla.: Specimen of crab, *Podocheila riisei* (51698).
- HEADLEY, F. B., Fallon, Nev.: 5 living specimens of *Opuntia pulchella* from Nevada (51528).
- HEALY, F. F., Washington, D. C.: Samples of soapstone from Alberene, Va. (51195).
- HEIDEMANN, OTTO, Department of Agriculture, Washington, D. C.: 3 typespecimens of Hemiptera, *Crophius schwarzi*, *C. heidemanni* and *C. angustatus* (51173).
- HELLER, A. A., University of Nevada, Reno, Nev.: Specimen of *Opuntia pulchella* from Nevada (50695); specimen of *Ribes* from Nevada (51431).
- HENDERSON, Judge JUNIUS, University of Colorado, Boulder, Colo.: Land shells from Colorado, belonging to the genera *Zonitoides* and *Vitrea* (51020).
- HENDLEY, H. W., U. S. National Museum: 3 drawings of tattoo markings of the Bontoc Igorots (50432).
- HERRE, A. C., Los Gatos, Cal.: 11 lichens collected in California (50727).
- HERRERA, A. L., Mexico, Mexico: 2 plants from Mexico (50660).
- HERRON, GEORGE R., Cuyabá, Matto Grosso, Brazil: Collection of butterflies from the State of Matto Grosso (50682: purchase).
- HESS, FRANK L., Washington, D. C.: 2 specimens of scheelite from California (51386).
- HEWITT, C. GORDON, Ottawa, Canada: 34 specimens of *Telenomus dalmanii* (51622).
- HICKMAN, Mrs. CHARLES W., Augusta, Ga.: A collection of 133 firearms which belonged to the late Dr. Charles W. Hickman (51504: loan).
- HILKEY, WILLIAM I., Laurel Dale, W. Va. (through John S. Lyon, Washington, D. C.): Sandstone cast of the pith of a Calamarian stem (51100).
- HILL, W. R., Washington, D. C.: Specimen of Wolf-spider, *Lycosa hellno* (51697).
- HINCKLEY, ROBERT, Washington, D. C.: A framed painting of Madam Anne Parker, wife of Bishop Samuel Parker, a vase presented by the Emperor of Japan to Dr. James Chadwick, a manikin with joints and muscles, and a spear or pike, a relic of the "John Brown" raid on Harpers Ferry in 1859 (51210).
- HINE, J. S., State University, Columbus, Ohio: Specimens of *Asilus* (50302).
- HOBSON, Mrs. ELIZABETH C., Washington, D. C.: Cloth-of-gold presented in 1697, by Robert Kidd, the pirate, to Mrs. Elizabeth Gardiner, of Gardiners Island, N. Y. (51642: loan).

- HOLM, DR. THEO., Brookland, D. C.: 4 jars of plants in alcohol (50508).
- HOLMES, WILLIAM H., U. S. National Museum: 21 leaf-shaped blades found in cache at Tenleytown, D. C., by James E. Collins (50989: purchase).
- HOLSINGER, S. J., Meteor, Ariz.: Meteorites and associations from Meteor Crater (50899: collected for the Museum); series of fresh-water shells from lake beds at the bottom of Meteor Crater (Coon Butte), Coconino County, Ariz. (51364).
- HOLZINGER, JOHN M., Winona, Minn.: Specimen of *Eupatorium* from Minnesota (50699); 30 specimens of mosses (50747: purchase).
- HOOPER, MRS. ETHEL MORRELL, Exeter, N. H.: Collection of birds' eggs and nests, formed by the late Clarence H. Morrell (50318).
- HORAN, JOSEPH H., U. S. National Museum: Nest of a hornet from Brentwood, Md. (51333).
- HORGAN, DR. E. J., Jenningson, W. Va.: 2 batrachians from Jenningson (51627).
- HOUGH, DR. WALTER, U. S. National Museum: Shilling issued during the reign of King George III of England (50372: loan).
- HOUSE, DR. H. D., Pisgah Forest, N. C.: 172 specimens of plants from North Carolina, including 3 specimens of *Selaginella* (50410; 50606).
- HOWARD, C. W., Government Entomologist, Lourenço Marquez, Portuguese East Africa: 32 specimens of parasitic Hymenoptera (51520).
- HOWARD, KENNETH S., Rochester, N. Y.: Specimen of the Hvittis meteorite, weighing 75 grams (50718: purchase).
- HOWARD UNIVERSITY MEDICAL SCHOOL, Washington, D. C.: Anatomical specimen (51106).
- HOWE MANUFACTURING COMPANY, Derby Conn.: Original pin machine invented by Dr. Jno. I. Howe in 1835 (51197).
- HOXIE, W. J., Savannah Natural History Society, Savannah, Ga.: Specimen of "mantis shrimp" or "squilla," *Chloridella empusa* (50745).
- HRDLÍČKA, DR. ALEŠ, U. S. National Museum: 2 specimens of fox, *Fennecus famelicus* from Egypt (50329); ethnological objects from the Oasis and village of Kharga, Egypt (50393); Easter eggs, Kraslice, from Bohemia (50674); collection of bats from Egypt (50675); 9 native baskets from the Oasis of Kharga, Egypt (50802); minerals, rocks, and Tertiary fossils from Egypt (50820); 4 negatives and prints, of a conical hill near Lisht, Egypt (51039); 12 specimens of flying-squirrel, *Sciuropterus* (51257). (See also under National Museum.)
- HUDSON-FULTON CELEBRATION COMMISSION, New York City: A set of the official medals of the Hudson-Fulton Celebration Commission (50904); 2 copies in silver of the official badge of the Commission (51199).
- HUGHES, MRS. FRANK, Atlanta, Tex.: Butterflies representing 2 species of the genus *Papilio* (50610).
- HUIDEKOPER, MRS. FREDERIC W., Washington, D. C.: Rostral appendage of a sawfish, *Pristis pectinatus*; specimen of porcupine fish, *Diodon hystrix* (50957).
- HUNGERFORD, T. H., U. S. National Museum: Skull of a porcupine, *Erethizon*, from Ontario, Canada (51577).
- HUNTER, JOS. W., Jacksonville, Fla.: Moth, *Enyo lugubris* (50916).
- HUNTINGTON, W. H., Washington, D. C.: Fly, *Erax aestuans* (50543).
- HURTER, JULIUS, sr., St. Louis, Mo.: Reptiles and batrachians from Italy (50759).
- HUTCHINSON, HENRY, Palatka, Fla.: Specimen of shell, *Arca xquicostata* from Florida (50896).
- IMPERIAL DEPARTMENT OF AGRICULTURE. (See under Barbados, West Indies.)

INTERIOR, DEPARTMENT OF:

Geological material from the Territories of Alaska and Hawaii exhibited at the Alaska-Yukon-Pacific Exposition, 1909, under the auspices of the Interior Department (51108); anthropological, biological, and geological material transferred from the museum of the Bureau of Education (51115; 51116); plaster relief maps of Hawaii and of the oil fields of Ohio, together with a piece of whalebone (51213); collection of framed photographs illustrating the various types and nationalities in the Hawaiian Islands, from the Department's exhibit at the Alaska-Yukon-Pacific Exposition, 1909 (51302).

U. S. Geological Survey: Rocks and ores illustrative of Bulletin 397 of the Survey (50414); small lot of Tertiary fossil vertebrates from the Payette formation, Snake River, Oreg., collected by C. W. Washburne (50689); specimens of paisanite from the San Francisco Mountain volcanic field, Arizona, received from H. H. Robinson, Hartford, Conn. (50775); vertebrate remains collected by J. H. Gardner in the Ignacio Quadrangle, southwestern part of Colorado (50792); vertebrate remains collected by A. L. Beekly in the Glenwood Springs, Colo., coal field (50793); Mesozoic vertebrate remains collected by T. W. Stanton in Wyoming and Montana (50794); vertebrate fossils collected by R. W. Stone in the Salt Creek Oil Field, Wyo. (50807); portion of a rib belonging to a mastodon or a mammoth, probably of Pleistocene age, collected by P. S. Smith on the Cyrus Noble claim, Third Beach, Nome, Alaska (50846); Mesozoic vertebrate fossils from the Standing Rock and Cheyenne River Indian Reservations, S. Dak., collected during the season of 1909 by parties from the U. S. Geological Survey, under the direction of W. R. Calvert (50865); samples of magnetite and of a nonmagnetic material from the beach at Redondo, Cal.; also piece of steel made from the extract of this sand by an electrical process (50915);

INTERIOR, DEPARTMENT OF—Continued.

specimen of a carboniferous fossil fish representing the species *Lissoprion ferrieri*, collected near Montpelier, Idaho, by H. S. Gale's party (51056); fossil plants comprising type and figured specimens of Hollick's "Cretaceous Flora of Southern New York and New England," and 44 specimens representing 27 species of fossil plants from the Amboy clay of New Jersey (51101); 26 specimens of variegated conglomerate from Parral, Fayette County, W. Va.; 6 specimens of variegated conglomerate breccia from the Mascot mine, near Park City, Utah; and a small slab, greenish sandstone with impressions, probably of raindrops, from D. & R. G. R. R. tunnel 9 miles below Salida, Colo. (51111); rock specimens from the pegmatite deposits of Maine, and a specimen of coarse porphyritic granite from Highland Plantation, Somerset County, Me. (51132); mercury minerals from Texas, type specimens of an important investigation (51154); about 70 specimens representing various species of fossil mammals from the Fort Union formation near Fish Creek, Sweet Grass County, Mont., collected by J. W. Gidley in 1909 (51182); vertebrate fossils from the Cretaceous of Georgia and Alabama (51358); a suite of specimens of geodes from Chamberlain Pass, in the Big Badlands of South Dakota (51494); Cambrian fossils collected by Eliot Blackwelder in the northeastern part of Utah during the season of 1909 (51582); Cambrian fossils collected by E. M. Kindle in Alaska during the season of 1907 (51583); Indian papoose board found in Hayden Gulch, Routt County, Colo. in 1905 (51629); rocks, etc., collected by N. H. Darton in the Black Hills and Wyoming and a suite of granites from Richmond, Va. (51653); fossil turtle from the White River beds in Big Badlands of South Dakota, collected by N. H. Darton (51654); specimens of hydrogiobertite from Napa County, Cal. (51718).

- INTERIOR DEPARTMENT AND BUREAU OF AMERICAN ETHNOLOGY: About 1,000 archeological objects collected by Dr. J. Walter Fewkes, of the Smithsonian Institution, in connection with the excavation and repair of "Cliff Palace" in the Mesa Verde National Park, Colo., in 1909 (51765).
- INTERNATIONAL FISHERIES COMMISSION, Stanford University, Cal.: A whitefish, lake trout, and sturgeon from the Great Lakes (51348).
- INTERNATIONAL PHOTOGRAPHIC EXHIBITION, Dresden, Germany: Diploma and medal awarded to the Smithsonian Institution at the International Photographic Exhibition held in Dresden, 1909 (51065).
- ISTHMIAN CANAL COMMISSION, Culebra, Canal Zone: 13 specimens of fossil shells from the Culebra Cut (50525); through Allan H. Jennings, about 500 specimens of mosquitoes, mostly bred, and 2 vials of small fishes (50790); specimens of supposed fossils (51187); cocoon and pupa of a moth, *Trichostibas*, belonging to the family Yponomeutidæ of the Tineina (51391).
- JACK, JOHN R., Fort Myers, Fla.: Specimen of stomatopod, *Lysiosquilla scabricauda*, from Aransas Pass, Tex. (50809).
- JACKSON, Prof. ROBERT T., Cambridge, Mass.: Sea urchins (50867: exchange).
- JAMES, Mrs. JULIAN, Washington, D.C.: Ruby Bohemian sugar bowl and lid (service of Mr. and Mrs. Sidney Mason); cut-glass fruit dish and saucer, and wineglass (service of Mr. and Mrs. Theodorus Bailey Myers); 2 saltcellars, 2 saucers, 2 spoons, and 3 stem wineglasses (service of Major and Mrs. Myers) (50309); sword, with scabbard and belt (51151); a bracelet of plaited strands of shell beads (51286); relics of the Bailey-Myers-Mason families (51497). Loan.
- JANIS, STEPHEN, Tuba City, Ariz.: 14 specimens of pottery from Red Lake, Ariz. (50939).
- JARDIN BOTANIQUE DE L'ÉTAT. (See under Brussels, Belgium.)
- JENNEY, C. E., Fresno, Cal.: Specimen of *Brachycistis nevadensis* (50408); 60 insects and 7 specimens of isopod, *Porcellio scaber* Latreille, var. *marmorata* Brandt & Ratzeburg (51482); 20 insects (51606).
- JOHNS, R. H., Houston, Tex.: Larva of a moth, *Megalopyge opercularis* (50935).
- JOHNSON, J. CHESTER, Marine Mills, Minn.: Stone implements, principally fragments, from burial mounds in the vicinity of Marine Mills (51227: exchange); 5 grooved stone sledges, or mauls (50375: exchange); fragments of pottery and arrowheads (50425).
- JOHNSON, Prof. O. B., Seattle, Wash.: About 30 specimens of insects from the Philippine Islands (51472).
- JOHNSTON, Mrs. E. E., Los Angeles, Cal.: Specimens of fresh-water shells washed into San Pedro Bay, Cal. (50622); shells representing 3 species, 1 being the type of a new species, from San Pedro, Cal., and the Gulf of California (51525); specimen of *Vanicoro aperta* from the Gulf of California (51693).
- JOHNSTON, J. R., Department of Agriculture, Washington, D. C.: 15 ferns from Cuba (50566).
- JONES, FAYETTE A., Albuquerque, N. Mex.: 3 specimens of *Pentamerus oblongus* from New Mexico (50471).
- JONES, MARCUS E., Salt Lake City, Utah: 365 plants, chiefly from the western part of the United States (50323: exchange); about 1,300 specimens of plants from the western part of the United States (51462: purchase).
- JORDAN, CLAY E., St. Louis, Mo.: Specimen of weevil, *Cholus*, from the Tropics (50303).
- JOSEPH, E. M., Weiser, Idaho: Portion of the skeleton of a Shoshone Indian, and a perforated ornament or "charm" of galena, found in Oregon (50803).
- JUDD, Mrs. FLORENCE A. ROCKWELL, New York City: Silver snuffbox, inscribed "M. F. to Mrs. C. C. Fillmore, 1862" (50590½).

- KASHEVAROFF, Rev. A. P., Sitka, Alaska: A collection of 18 Russian Church books which were exhibited at the Alaska-Yukon-Pacific Exposition (51294); an unbound copy of the "Horologion," a primer used for religious studies in the Russian schools (51638).
- KAVANAGH, J. A., Colchester, Ill. (through David White): 2 specimens of leaflets from near the top of a large frond of *Alethopteris serlii* (51461).
- KEATING, Wm. E., Marblehill, Ga.: Specimens of "praying mantis" or "rear horse," *Stagmomantis carolina* (50703).
- KELLETER, Mrs. CARL, St. Louis, Mo. (through Mrs. James W. Pinchot): A piece of Tönder lace made by peasant girls in Denmark, and brought from Bavaria in 1849 (51705).
- KELLEY, Miss E. V., Edinburg, Va.: Parasitic wasp, Chrysididae (50497).
- KENNEDY, Miss MAY S., Charlestown, W. Va.: Marble bust of Mrs. Harriet Lane Johnston, by William H. Rinehart, with pedestal (51650: loan).
- KERVILLE, HENRI GADEAU DE, Rouen, France: Isopods from Syria (51204).
- KEW, LONDON, ENGLAND, ROYAL BOTANIC GARDENS: 6 living specimens of Cactaceae (50907); specimen of *Cibotium* from Guatemala (51524: exchange).
- KIMBALL, GORDON, Montrose, Colo.: Small pottery head found in Cañon City, Colo. (51611: loan).
- KIMBALL, Miss LAURA F., National City, Cal.: Living specimen of *Selaginella bigelovii* from California (50722: exchange).
- KINGSTON, JAMAICA, DEPARTMENT OF AGRICULTURE, HOPE GARDENS: 2 specimens of ferns from Jamaica (51157); specimen of fern representing the species *Hemitelia wilsoni* from Jamaica (51177: exchange).
- K. K. NATURHISTORISCHES HofMUSEUM. (See under Vienna, Austria.)
- KLASE, J. S., Washington, D. C.: Horned lizard from Owyhee County, Idaho (51734).
- KNAB, FREDERICK, Department of Agriculture, Washington, D. C.: 100 specimens of Coleoptera from Omaguas and AQUITOS, Peru, and Manoa and Santarem, Brazil (51573).
- KNEUCKER, A., Karlsruhe, Germany: 30 specimens of Cyperaceae (51389: exchange).
- KNIGHT, HORACE, London, England: 104 colored illustrations of Microlepidoptera (50380: purchase).
- KOKLES, CHARLES, Washington, D. C.: 5 specimens of starfishes from Christchurch, New Zealand (50591).
- KÖNIGL. BOTANISCHER GARTEN UND MUSEUM, DAHLEM BEI BERLIN. (See under Berlin, Germany.)
- KOREN, JOHAN, Brooklyn, N. Y.: Skin of *Syrnium lapponicum* (51078: purchase).
- KRANTZ, Dr. F., Bonn, Germany: Casts of crania, and of skeleton of ancient French cave man; casts of crania of Australian aborigines (50314); 2 plaster casts of vertebrate fossils (50470: purchase).
- KROGH, CHRISTIAN, Juneau, Alaska: An oil portrait of the Indian chief, Anacla-has, of the Tacu tribe, Alaska (51374).
- KROUT, A. F. K., Glenolden, Pa.: Moss, *Fontinalis novæangliæ*, from Pennsylvania (50770).
- KRYGER, J. P., Gentofte, Denmark: Specimens of *Pezomachus zonatus*, with nests from which they were reared (51662).
- KUME, T., New York City: Japanese pearl-oyster shell with cultivated pearl attached, and 2 pieces of Japanese cultured pearls (51155).
- KUNZÉ, Dr. R. E., Phoenix, Ariz.: 2 specimens of cacti from Arizona (50516); 4 specimens of living cacti from Durango, Mexico (51440: exchange).
- KURTZ, FRED. L., Pecos, Tex.: 2 teeth of fossil shark, *Ptychodus*, from Colorado (51312).

- LAET, FRANTZ DE, Contich, Belgium: Living specimen of *Cephalocereus* (50661: exchange).
- LAING, MILTON C., Waterlick, Va.: Skin of an albino raccoon (51446: purchase).
- LAMB, Dr. D. S., Army Medical Museum, Washington, D. C.: 23 anatomical specimens (50704; 50979; 51193; 51213).
- LANE, TALBOT F., U. S. National Museum: 2 stone axes found in Stafford County, Va. (50436); 5 stone implements from a mound west of Orange Court House, Orange County, Va. (51377).
- LANG, Lieutenant JOHN W., U. S. Army, Mindanao, P. I.: Moth, *Attacus cæsar* (50641).
- LAPIDGE, Mrs. PAULINE PHILIP, Rockville Center, N. Y. (through Miss Katharine S. Pratt): Collection of sculptures and other objects connected with the life, as an artist, of the late William Henry Philip; also a naval uniform coat worn by Admiral Farragut when lashed to the mast during the battle of Mobile Bay (51104).
- LATTER DAY SAINTS OF JESUS CHRIST, CHURCH OF (Mormon Church), Salt Lake City, Utah (through George D. Pyper, Treasurer, Latter Day Saints Committee for the Alaska-Yukon-Pacific Exposition): Plaster model of the Salt Lake Temple and model of the Salt Lake Tabernacle (51001).
- LEIBERG, J. B., Leaburg, Oreg.: Specimens of fern, *Trichomanes*, from the Philippine Islands (51437).
- LELAND STANFORD JUNIOR UNIVERSITY, Stanford University, Cal.: 74 specimens of fishes, representing 8 species, from Irkutsk, Siberia, collected by Dr. James Francis Abbott (51347).
- LEÓN, Brother, Havana, Cuba: 25 ferns from Cuba (50368).
- LIENHERDT, J. R., Edgemont, Nev.: Spider, *Epeira gemma* (50917).
- LIGHT, SOL F., Atsugi, Kanagawa Ken, Japan: Batrachians, fishes, mollusks, insects, and invertebrates from Japan (50316); specimens of *Odonata* from Japan (50761); scale insects, etc. (50959); 27 ferns and fungi from Japan (51025).
- LINARD, DREW, American Consul, Ceiba, Honduras: A clay object representing a human head, found in the vicinity of Ceiba (50764).
- LINDAHL, Dr. JOSUA, Cincinnati, Ohio: 10 specimens representing 2 species of Isopods (51360: exchange).
- LINTON, Dr. EDWIN, Washington, Pa.: Isopods representing 3 species from Bermuda (51229).
- LIST, Miss FANNY, Washington, D. C.: A decorated wooden box illustrating German folk-art, made by pupils at Oberammergau, Bavaria (51405).
- LLOYD, Prof. F. E., Auburn, Ala.: Living specimen of *Opuntia* from Alabama (50599); 46 living specimens of cacti (51292).
- LOCKE, OTTO, New Braunfels, Tex.: Specimens of *Nymphæa* n. sp., from Texas (51686).
- LODGE, Hon. H. C., U. S. Senate: Stone collar from Porto Rico (50937).
- LOGUE, G. G., St. Marys, Pa.: Earthenware vessel from Santa Cruz, Canal Zone (51396).
- LONDON, ENGLAND, BRITISH MUSEUM (NATURAL HISTORY): Cotype of *Achæus affinis* (50539: loan); 2 photographs and 2 fragmentary specimens of fern-types, *Hemitelia* (51387: exchange).
- LONG, The Misses, Washington, D. C.: A pair of beaded moccasins (51535); collection of articles illustrating the handiwork of American gentlewomen of the 19th century, and also the handiwork of other nations (51536: loan).
- LONGYEAR, JOHN M., Brookline, Mass.: Fossil plants and invertebrates from Spitzbergen (51221).
- LÖNNBERG, Dr. EINAR, Zoological Museum, Stockholm, Sweden: 20 skulls of European hares (51271: exchange).
- LOWE, HERBERT N., Long Beach, Cal.: 7 specimens of shrimp, *Crago nigricauda* (50400); specimens of *Epiphragmophora tryoni* and *gabbi* from Santa Barbara Island, Cal. (50644).

- LUMHOLTZ, CARL, Tucson, Ariz.: 2 living cacti from Arizona (50413); specimen of living *Opuntia* and specimen of *Peniocereus greggii* from Arizona (50479; 51649); 3 living cacti from the Southwest (50629).
- LUNELL, Dr. J., Leeds, N. Dak.: 2 sheets of *Laciniaria* from North Dakota (50406: exchange); 46 specimens of *Laciniaria* collected in North Dakota (51648).
- LYON, FRANK, Unity, Oreg.: Specimens of chromite (51485).
- MACDOUGAL, Dr. D. T., Tucson, Ariz.: Living specimen of *Dudleya* from California, 2 living specimens of *Sedum*, and 8 living specimens of *Mamillaria* from Arizona (50443; 50652; 50655; 50860). (See under Carnegie Institution.)
- MCALISTER, Dr. J. A., Dental Surgeon, U. S. Army, Parang, Mindanao, P. I.: Spider, *Polys idæa* (50919).
- MCATEE, W. L., Department of Agriculture, Washington, D. C.: Living specimens of *Opuntia* from North and South Carolina (50570; 51735); 3 specimens of *Laciniaria*, from Virginia (51342); plant from Maryland (51517); fishes from the vicinity of Plummery Island, Potomac River (51663); 8 specimens of dragon flies (51729).
- MCBATH, Rev. WALKER E., Quezaltenango, Guatemala: Guatemalan mat and raincoat of palm (50870); photographs of Quiche Indians (50924).
- MCBRIDE, J. C., Seattle, Wash.: 2 copper kettles and 2 brass candlesticks used by early Russian settlers at Unalaska, and a Russian padlock from the first Russian church at Unalaska (50956).
- MCCLELLAN, G. A., Editor, The Dayton Journal, Dayton, Ohio: Hand printing press which was used in printing the first newspaper issued from a balloon, and a copy of the newspaper (50877).
- MCCLENDON, Dr. J. F., Columbia, Mo. (through Dr. Charles B. Wilson): Parasitic copepods from California and Woods Hole, Mass. (50910).
- MCCONNELL, O. J., Prescott, Ariz.: Specimen of alga from Arizona (50469).
- McCOOL, WILLIAM, U. S. S. "Mayflower:" Chinese embroidered robe from Peking (50888: loan).
- MCGEE, Mrs. ANITA NEWCOMB, Washington, D. C.: Archeological and ethnological objects from various localities (51321).
- MCGREGOR, ERNEST A., Stanford University, Cal.: Specimen of *Pterixia* from California (50731); 183 plants from California (51029: purchase).
- MCGUIRE, J. D., Bureau of American Ethnology, Washington, D. C.: Objects of shaped flint from the shores of Moosehead Lake and Mount Kineo, Me. (50752).
- McMILLEN, R. H., Wheeling, W. Va.: Specimens of vanadium ore from the Jo Dandy Claim, Paradox Valley, Colo. (51553).
- MACKENSEN, BERNARD, Kerrville, Tex.: 35 specimens of living cacti from Texas (50386; 50474; 50562; 50982); 8 specimens of living plants of *Opuntia* from Texas (50480; 50569); 5 living specimens of *Nymphæa* and 6 of *Mamillaria* from Texas (51369; 51661).
- MACKIE, DAVID B., Bureau of Agriculture, Manila, P. I.: Mammals, birds, insects, and eggs from the Philippine Islands (50844).
- MACOUN, Dr. JOHN, Ottawa, Canada: 250 pluricarpous mosses from Canada (50930: purchase); series of shells dredged in Barclay Sound, Vancouver Island, including cotypes of 16 new species (51676). (See under Ottawa, Canada, Geological Survey of.)
- MAIN, Mrs. CHARLOTTE E., Washington, D. C.: Fishes, mollusks and other invertebrates, plants, nest of a spider, 2 phytseter teeth, and an armadillo shell, rocks, 4 alabaster models of celebrated Italian structures, a lot of cinders from Pompeii, model of a Polynesian canoe, and 2 cocoanut-shell drinking cups (50883).
- MALL, Prof. F. P., Johns Hopkins University, Baltimore, Md.: Anatomical specimens (50289).

- MANAHAN, F. S., Tabasco, Colo.: Beetle, *Acanthocinus spectabilis* (50535).
- MANILA, PHILIPPINE ISLANDS, BUREAU OF SCIENCE: About 2,000 plants from the Philippine Islands (50379: exchange); 2,192 plants from the Philippine Islands (50451: exchange); land and fresh-water shells (50563); land and fresh-water shells collected by Hon. Dean C. Worcester at the Batanes Islands and on the northeast coast of Luzon; also shells from the island of Polillo collected by C. B. Robinson, and from Palawan and Mindoro by C. M. Weber (50949); 120 specimens of Orchilaceae from the Philippine Islands (51068: exchange); land and fresh-water shells from the Philippine Islands (51655); 1,478 plants, mainly from Mexico and Brazil (51276: exchange).
- MANZ ENGRAVING COMPANY, Chicago, Ill.: 6 sheets of process color printing (50335).
- MARINE BIOLOGICAL STATION, San Diego, Cal. (through Dr. Charles B. Wilson): Parasitic copepods (50934).
- MARSHALL, ERNEST B., Laurel, Md.: 3 specimens of *Unio complanatus* from Patuxent River (51425); skull of a muskrat (*Fiber zibethicus*), skull of a mink (*Lutreola*) and 2 specimens of weasel (*Putorius*), from Laurel (50741; 51042; 51172; 51255); fishes from the Patuxent River, collected by the donor and R. B. Overington (51450); and fishes collected near Laurel (50349; 50922).
- MARSHALL, GEORGE, U. S. National Museum: 5 specimens of *Blephariglottis peramæna* from the vicinity of Washington (50441); 2 specimens of pied-billed grebe, *Podilymbus podiceps* (50748); stoneware bottle found near Tillery, N. C. (50986: loan).
- MARSHALL, H. R., Clarkton, N. C.: Squirrel, *Sciurus niger*, from Clarkton (51484).
- MARTIN, Dr. K., Rijks Geologisch-Mineralogisch Museum, Leiden, Holland: 2 specimens of billitonites from the island of Billiton (50819: exchange).
- MARYLAND AGRICULTURAL EXPERIMENT STATION, College Park, Md.: 6 specimens of parasitic Hymenoptera, the types of 4 species (51679).
- MASON, L. H.: 2 land turtles (50691).
- MATIEGKA, Prof. Dr. J., Prague, Bohemia: 25 brachycephalic skulls of Czechs (51334: exchange).
- MATTHEWS-NORTHROP WORKS, New York City: 4 specimens of process color-prints (50343).
- MAYNARD, GEORGE WILLOUGHBY, New York City: Portrait in oil, of Dr. Edward Maynard, by his son, the donor (51281).
- MEARNS, Lieut. Col. E. A., U. S. Army (retired), U. S. National Museum: Specimens of *Donax* from Rome, Italy (51557); mammals, birds, birds' eggs, reptiles and batrachians, marine invertebrates and shells from Smith's Island, Va. (51562); specimen of red-eye vireo, *Vireo olivaceus* (51594); 2 eggs of mourning dove, *Zenaidura carolinensis* (51636).
- MEDAL OF HONOR LEGION OF THE UNITED STATES OF AMERICA (through Walter Thorn, Commander, Brooklyn, New York): Photographs of 304 Medal of Honor men (51057; 51608).
- MERRILL, G. K., Rockland, Me.: 50 specimens of lichens from various localities, mainly in North America (*Lichenes Exsiccati*, fascicles I and II) (50784: purchase).
- MERRILL, Dr. GEORGE P., U. S. National Museum: Specimen of brown bat, *Eptesicus fuscus*, from Washington, D. C. (51460); skull of a coyote, *Canis*, from Diablo Canyon, Ariz. (51689). (See also under National Museum.)
- MERRILL, Miss HARRIET B., Madison, Wis.: 500 specimens of insects from Brazil (50560: purchase).
- MERRITT, HUGH H., Vilas, S. Dak.: Double-headed duck (51222: purchase).

- METROPOLITAN MUSEUM OF ART, New York City: Large collection of human bones from cemeteries of the 12th and other dynasties, at Lisht, Upper Egypt, and from burial grounds of the Coptic period at the Oasis of Kharga (50330: collected for the National Museum by the Egyptian Expedition of the Metropolitan Museum of Art); samples of cloth in which bodies were buried, from various dynasties, Egypt, collected for the National Museum by Dr. A. Hrdlička, while with the Egyptian Expedition of the Metropolitan Museum of Art (50812); collection of photographs from negatives made by Dr. A. Hrdlička in investigation of skeletal material for the Metropolitan Museum's Egyptian Expedition (51230).
- MEYERS, P. R., Harrisburg, Pa.: 22 insects including some cotypes, and 20 specimens of parasitic Hymenoptera (50881).
- MICHIGAN, MUSEUM OF UNIVERSITY OF, Ann Arbor, Mich.: Types of 5 species of insects, Thysanoptera (50530).
- MIEL, ERNEST, Alameda, Cal.: Glass beads used by early settlers, probably of the Spanish period, for traffic with the Indians (51373).
- MILLER, Prof. B. L., South Bethlehem, Pa.: About 2,000 specimens of fossils from the Eocene of Wilmington, N. C. (50358).
- MILLER, GERRIT S., jr., U. S. National Museum: Small collection of land and fresh-water shells from Spain (51429). (See also under National Museum.)
- MILLER, Miss MARY F., Washington, D. C.: 54 specimens of mosses from Maryland, Virginia, and the District of Columbia (51278).
- MINERAL HILL MINING COMPANY, Condonully, Wash.: Specimens of molybdenite (50951).
- MISSOURI BOTANICAL GARDEN, St. Louis, Mo.: Seeds of *Opuntia* for the Herbarium (50766).
- MITCHELL, Mrs. F. R., Southold, N. Y.: Specimen of *Centaurea solstitialis* (50506).
- MITCHELL, Hon. J. D., Victoria, Tex.: Type specimen of *Engystoma areolatum* from Victoria County, Tex. (50352).
- MOLTKE, Countess CARL VON, Washington, D. C. (through Mrs. James W. Pinchot): A piece of Tönder lace made in Denmark early in the 18th century (51706).
- MOODIE, Prof. ROY L., Lawrence, Kans.: Specimen of "sea mouse" from Biological Station, near Orcas Island, Puget Sound (51135); 5 specimens of fossil wood (51207).
- MOORE, CLARENCE B., Philadelphia, Pa.: Arrow points of flint, coal, and glass made by Mr. Arthur Cline of Philadelphia (50856); Indian skulls and bones from Newport, Ark. (51261); skulls and other skeletal remains from Madison, Ark. (51506); collection of aboriginal material consisting of human skulls and bones from Marked Tree, Ark. (51619).
- MOOREHEAD, WARREN K., Andover, Mass.: 2 incomplete skeletons from a prehistoric cemetery at Hopkinsville, Ky. (51408: exchange).
- MORELL, T. J., Denver, Colo.: Specimen of native silver (50366).
- MOREY, E. P., Washington, D. C.: An iron stirrup of the early Mexican-Spanish period, found in a cave in Sonora (51174: loan).
- MORRIS, Miss FRANCES, New York City (through Mrs. James W. Pinchot): 2 bits of old Binche lace (51708).
- MORRISON, W. R., U. S. National Museum: Specimen of red bat, *Nycteris noveboracensis*, from Washington, D. C. (50659).
- MORSE, Prof. E. S., Peabody Museum, Salem, Mass.: Brachiopods representing 4 species from Japan (50621).

- MORTENSEN, Dr. TH., Copenhagen, Denmark: Microscopic slide containing 4 pentacrinoid larvæ of *Antedon mediterranea* (51248: loan).
- MOSELEY, E. L., Sandusky, Ohio: 3 specimens of *Lacinaria* from Ohio (50653).
- MOSONYI, EML: A "marimba" and 5 sticks (model of the latest style double marimba) and a vase, from Guatemala (51700).
- MOTTAZ, CHARLES, Geneva, Switzerland: 2 bats, *Rhinolophus*, from near Nîmes, Gard, France (50286: exchange).
- MOUNT LYEEL MINING AND RAILWAY COMPANY, LIMITED, Robert Sticht, General Manager, Queenstown, Tasmania (through H. D. Baker, American Consul): 62 lots of rocks and minerals from the Mount Lyell and North Mount Lyell mines (51156).
- MULLINS, W. E., San José, Costa Rica: Wood bored by *Limnoria lignorum* and *Chelura terebrans*, from Limon, Costa Rica (50382).
- MUNDER, NORMAN T. A., Baltimore, Md.: Specimen of 4-color work showing different stages of printing, and a bound volume entitled "The Strathmore Quality Book-Papers" (50801).
- MUNICH, GERMANY, ZOOLOGISCHE SAMMLUNG DES BAYERISCHEN STAATES: 10 specimens representing 10 species of Pennatulidæ from Japan and the Mediterranean (51081: exchange).
- MUNROE, Miss HELEN, Smithsonian Institution: Ball dress of brocade silk, with design in bouquets of fruits and flowers (50763: loan).
- MUSÉE D'ANTHROPOLOGIE ET D'ETHNOGRAPHIE DE PIERRE LE GRAND. (See under St. Petersburg, Russia.)
- MUSÉE ETHNOGRAPHIQUE TCHÈQUO-SLAVE. (See under Prague, Bohemia.)
- MUSÉE ROYAL D'HISTOIRE NATURELLE DE BELGIQUE. (See under Brussels, Belgium.)
- MUSEO ETHNOGRAFICO DE LA FACULTAD DE FILOSOFIA Y LETRAS, UNIVERSIDAD NACIONAL DE BUENOS AIRES. (See under Buenos Aires, Argentina.)
- MYER, Miss VIOLA W., Washington, D. C.: Portrait in oil of Miss Viola W. Myer, by Carle J. Blenner (51652: loan).
- MYERS, P. N., U. S. National Museum: 10 cotypes of *Mimesa myersiana* (51284).
- NATIONAL BATTLEFIELDS COMMISSION, Quebec, Canada (through J. George Garneau, chairman): A bronze medal in commemoration of the Tercentenary of the founding of Quebec by Champlain (51532).
- NATIONAL ENGRAVING COMPANY, Washington, D. C.: 5 specimens of process color printing (50336).
- NATIONAL SOCIETY OF THE COLONIAL DAMES OF AMERICA, Washington, D. C.: A silver "baptismal basin" sent from Holland to the first Dutch Church on Manhattan Island in 1694, lent to the National Society by the New York Society of the Colonial Dames of America (51295); a bronze plaque of George Washington in colonial uniform, after a painting by Peale, presented to the National Society by the Society of Colonial Wars of the State of New York (51301); an embroidered flounce and a portemonnaie in crochet work (period of 1790), deposited by Mrs. E. D. Kimball, president of the Kansas Society (51717). Loan.
- NATURHISTORISKA RIKSMUSEUM. (See under Stockholm, Sweden.)
- NAVY DEPARTMENT: 82 muskets, rifles, and carbines from the League Island Navy Yard (50774).
- Bureau of Construction and Repair:* Model of the Atlanta (51211); model of the armored cruiser Pennsylvania (51464). Loan.
- U. S. Marine Corps:* Trophies won by the Marine Corps in rifle competition, and silver cup won by a boat crew of the U. S. S. Illinois, composed of marines (51201); the Mosher cup, a trophy won by the Marine Corps in rifle competition (51513). Loan.
- NELSON, L. A., Seattle, Wash.: Specimen of plant, *Lycopodium obscurum*, from Washington (50825).

NEW BRIGHTON, NEW YORK, MUSEUM OF THE STATEN ISLAND ASSOCIATION OF ARTS AND SCIENCES: 8 dragonflies, representing 6 species, from Virginia and North Carolina (50960); 60 specimens of Lepidoptera (51499). Exchange.

NEWCOMB, Mrs. SIMON, Washington, D. C.: A very valuable collection of objects which belonged to the late Prof. Simon Newcomb, consisting of a large jasper vase, presented by the observatory of Poulkova, Russia; 2 bronze vases, the gift of the Imperial University at Tokyo, Japan; a bronze medalion (the Sylvester prize of the Johns Hopkins University); and a collection of diplomas, announcements of degrees, and of other honors conferred on Prof. Newcomb (50620: loan); dress uniform, chapeau, sword and belt, medals, tablets, and a photograph of a portrait of the late Simon Newcomb (51055: loan); portrait in oil of Prof. Simon Newcomb, by C. H. L. Macdonald (51587: loan).

NEWELL, WILMON, College Station, Tex.: About 1,200 specimens of mosquitoes, mostly from the Dr. Dupree collection from Louisiana (50970).

NEWGARDEN, Maj. GEORGE J., U. S. Army (retired), War Department, Washington, D. C.: Skin of *Varanus* from Mindanao, Philippine Islands (51438).

NEW MEXICO AGRICULTURAL COLLEGE, Agricultural College, N. Mex.: 17 plants from New Mexico (50879: exchange).

NEW YORK BOTANICAL GARDEN, Bronx Park, New York City: two specimens of *Juncus* from the West Indies (50429); specimen of *Hymenophyllum* from Cuba (50604: exchange); specimen of *Juncus* from South Carolina (50670: exchange); specimen of *Hydrocotyle* from Cuba (50782: exchange); 15 living specimens of Cactaceae collected in Cuba (50852: exchange); 2 living specimens of *Mamillaria* from Cuba (50906: exchange); 4 living specimens of *Hylocereus* from Haiti, and a specimen of *Cereus tunilla* from Costa Rica (50929: exchange); 16 specimens of plants (51011: exchange); 2 living specimens

NEW YORK BOTANICAL GARDEN—Contd. of *Pereskia* (51047: exchange); 39 specimens of ferns from Santo Domingo, and 7 specimens of Crassulaceae (51167: exchange); 247 plants from Jamaica and the Bahamas (51178: exchange); 2 specimens of ferns from the West Indies (51183: exchange); 279 plants mainly from Cuba and the Bahamas (51186: exchange); 301 plants from Cuba (51220: exchange); 4 specimens of ferns from the eastern part of Mexico (51385: exchange); specimen of *Tradescantia* from Mexico (51441: exchange); 7 specimens of Cactaceae collected in Cuba (51599: exchange); 6 specimens of ferns from Jamaica (51616: exchange).

NEW YORK ZOOLOGICAL PARK, New York City: Chimpanzee, *Anthropithecus* (50908).

NIGHTINGALE, Rev. ROBERT C., Beechamwell Rectory, Norfolk, England: A brass, etched, African vase (51395).

NIHISER, Dr. W. M., Hagerstown, Md.: Portion of the trunk of a sassafras tree, which grew near Keedysville, Md. (51159).

NIXON, L. R., Homestead, Fla.: Specimens of *Veronicella*, injurious to crops, from Florida (50785).

NORTON, CHARLES, Mohawk, Ariz.: 2 specimens of Arachnida representing the species *Hemiphrynus raptator* (50577).

NOYES, Miss KATHERINE, Washington, D. C.: A collection of old English china which belonged to the Plimpton and Haswell families of Vermont and Massachusetts (51180: loan).

O'CONNOR, JEREMIAH, Washington, D. C.: Model of Andrew O'Connor's design for the Commodore Barry Monument, and a perspective drawing of the same (51411).

O'DWYER, HENRY A., Washington, D. C.: Sword, with scabbard, used during the Civil War (50977).

OLDROYD, Mrs. T. S., Long Beach, Cal.: 3 species of Pholads from California (51349); 14 specimens of boring mollusks from San Pedro (51422).

- OLDYS, HENRY, Department of Agriculture, Washington, D. C.: Pheasant, *Phasianus* (51714).
- OLMSTED, Miss HELEN, U. S. National Museum: Maryland yellow-throat, *Geothlypis trichas* (50547).
- ORCUTT, CHARLES R., San Diego, Cal.: Shells representing 17 species from Vera Cruz, Mexico (51233); shell of a turtle from Mexico, representing the species *Staurotypus triporcatus* (51542); series of land shells from Oaxaca, Mexico, including 2 new species (51694).
- OSGOOD, W. H., Washington, D. C.: 2 human skulls from Alaska (50290).
- OSTERHOUT, GEORGE E., New Windsor, Colo.: 4 specimens of *Allionia* from Colorado (51134).
- OTTAWA, CANADA, GEOLOGICAL SURVEY OF CANADA (through Dr. John Macoun): Crabs and shrimps from Vancouver Island (50831); 14 lots of isopods, amphipods, and a pycnogonid from British Columbia (50864); decapod crustaceans from British Columbia (51131); 48 specimens of Canadian plants (51219; exchange); skin of trout representing the species *Salvelinus hoodii* (51258).
- OTTAWA SILICA COMPANY, Ottawa, Ill.: Photograph of a mine at Mill "A," with samples of coarse and standard sand (51044).
- PAGANI, JOSEPH, Washington, D. C.: 24 papal and other medals and 1 Russian coin (51691; 51724).
- PALMER, Dr. EDWARD, Washington, D. C.: Ethnological material from Mexico (50468; purchase); rocks from various sources in Mexico, and shells from the western coast of America (50498; 50553).
- PALMER, E. J., Webb City, Mo.: 7 living specimens of *Opuntia* from Missouri (50568; 50662; 50693); living specimen of *Opuntia macrorhiza* from Missouri (50626).
- PALMER, WILLIAM, U. S. National Museum: Tooth from type specimen of *Galeocerdo fasciatus* (50356).
- PARÉT, Mrs. JOHN F., Sweetwater, Tex.: 6 specimens of living Cactaceæ from Texas (51335).
- PARIS, FRANCE, MUSEUM OF NATURAL HISTORY (through Prof. E. L. Bouvier): 29 specimens of isopods from Ecuador (51266); 30 specimens representing 23 species of isopods from the Travailleur and Talisman expeditions (51361).
- PARISH, S. B., San Bernardino, Cal.: 2 specimens of *Dudleya* from California (50519).
- PARTELLO, Maj. J. M. T., U. S. Army, Parang, Mindanao, P. I.: 2 birds' eggs from Mindanao (50404); 3 insects, 3 birds' eggs, and a seed from Mindanao (50504); snake, *Chrysopelea ornata*, from Parang (50544); insects from the Philippine Islands (50617); crustaceans, reptiles, and insects from the Philippine Islands (50840).
- PATIENCE, ALEXANDER, Glasgow, Scotland: 5 specimens of isopods parasitic on shrimps (51254).
- PATTERSON, J. T., Austin, Tex.: 3 specimens of the lizard *Sceloporus spinosus floridanus*, from Austin (50875).
- PAZOS, J. H., San Antonio de los Baños, Cuba: Collection of insects from Tunis, Africa, made by Dr. F. Santchi (50954).
- PEABODY MUSEUM OF NATURAL HISTORY, YALE UNIVERSITY, New Haven, Conn.: 2 specimens of Dace, *Agosia nubila*, from warm springs in Jackson Hole, Wyo. (50944).
- PEARSALL, R. F., Brooklyn, N. Y.: 18 specimens of Lepidoptera and 7 specimens of Hymenoptera (51512).
- PENNELL, F. W., Wawa, Pa.: 302 plants from the eastern part of the United States (50686; collected for the Museum); 6 plants from Pennsylvania (50850).
- PENNSYLVANIA HOSPITAL, Philadelphia, Pa.: Box of muslin showing the destructive work of *Philoterme flavipes* (51671).
- PERTH, WESTERN AUSTRALIA. (See under Western Australian Museum and Art Gallery.)

- PETERSEN, N. F., Baton Rouge, La.: 14 plants, *Carphephorus pseudoliatris* and *Laciniaria* sp., from Louisiana (50725: exchange).
- PFIZENMAYER, Prof. E. W., Michailowski-Pereulok, Tiflis, Caucasus, Russia: Skull of a Siberian moose and skull of a Russian moose (51264: purchase).
- PFORDTE, OTTO F., Rutherford, N. J.: Specimens of ores from Cobalt and Moose Mountain, Ontario (51631).
- PHILLIPS, D. E., Washington, D. C.: Cutlass, plowed up on Cedar Creek, Jefferson County, Iowa (50681).
- PIERCE, W. DWIGHT, Dallas, Tex.: Types of 58 species of *Strepsiptera* and specimens of 2 other species (50491).
- PILATE, G. R., San Leandro, Cal.: 55 specimens of Coleoptera from California (50315).
- PILSBRY, Dr. H. A., Academy of Natural Sciences, Philadelphia, Pa.: 4 specimens of Ashmunellas from Arizona (50513); about 150 specimens, representing 10 species, of land shells from Bermuda (50638); specimens of *Lymnaea*, representing 3 species, from Patagonia, and cotypes, representing 1 species of *Marinula*, from the Gulf of California, and *Ancylus* from Ohio (51170); 4 specimens of *Corneocyclus magellanicus* from Patagonia (51240).
- PILSUDSKI, BROVISLAV, Paris, France: 159 photographs representing the aborigines of East Asia (50618: purchase).
- PINCHOT, Mrs. JAMES W., Washington, D. C.: A very interesting collection of 61 European laces (50762); 2 panuelos from Isla de Panay, Philippine group (51045: loan); an embroidered picture, about the 17th century (51066); oil painting, portrait of Mrs. Cross, of Milford, Pa., by Eastman Johnson (51531); collection of Limoges and Chinese enamels (51607: loan). (See under Mrs. William E. Curtis; Mrs. Thomas D. Goodell; Mrs. Carl Kelleter; Countess Carl von Moltke; Miss Frances Morris; Mrs. W. A. Slater.)
- PINYAN, A. H., Bisbee, Ariz.: Specimen of American silk moth, *Samia* (50394).
- PIPER, C. V., Department of Agriculture, Washington, D. C.: 4 specimens of *Lomatium* from Oregon (50407); 35 insects from Oregon (50808); 10 specimens of Coleoptera (51402); 71 specimens of plants from Oregon and Washington (51564). (See under Department of Agriculture, Bureau of Entomology.)
- PIRTLE, Dr. G. W., Carlisle, Ind.: Grasshopper, *Schistocerca americana* (51350).
- PITTIER, H., Department of Agriculture, Washington, D. C.: 18 plants from Cocos Island, Central America (51158); 9 plants from Costa Rica (51242); 3 specimens of *Castilloa* from Jamaica (51684).
- PLANT, GEORGE H., Macon, Ga.: Meteoric stone from McDuffie County, Ga. (50522: purchase).
- POE, FRANCIS B. (See under Thomas Gerry Townsend.)
- PORTLAND SOCIETY OF NATURAL HISTORY, Portland, Me.: About 75 specimens of fresh-water crustaceans from Maine (51079).
- POTTER, J. L., Brownsville, Md.: Beetle, *Dynastes titus* (50534).
- POWELL, S. L., Roanoke College, Salem, Va.: About 100 specimens of Ordovician fossils from Salem, Va. (50806: exchange).
- PRACHT, MAX, Washington, D. C.: Bannerstone found in Alexander County, N. C. (51059).
- PRAGUE, BOHEMIA, ČESKO-SLOVANSKÉ NÁRODOPISNÉ MUSEUM (Musée Ethnographique Tchèque-Slave): A collection of ethnological objects representing the true Slav folk-art, which has survived from olden times (50645: exchange).
- PRATT, Miss KATHARINE S. (See under Mrs. Pauline Philip Lapidge.)
- PRETZ, HAROLD W., Allentown, Pa.: 10 specimens of grasses from Pennsylvania (50955: exchange).
- PRINGLE, C. G., Burlington, Vt.: 100 specimens of mosses from Mexico (50353: purchase).

- PRUITT, Miss TOMMIE L., Nicholsville, Ala.: Mole cricket, *Gryllotalpa borealis* (50540).
- PURPUS, C. A., Zacuapan, Vera Cruz, Mexico: 6 living specimens of *Sedum* from Mexico (50781, 50848); 25 living specimens of Cactaceæ from Vera Cruz (50880); 3 living specimens of Crassulaceæ from Vera Cruz (50893); 2 living specimens of *Cereus* from Mexico (51122). Purchase.
- PURPUS, Dr. J. A., Darmstadt, Germany: Specimen and 2 photographs of a plant, *Echeveria*, from Mexico (51516).
- QUADRI-COLOR COMPANY, New York City: 31 specimens of process color-printing (50340).
- QUEEN, WILLIAM, Washington, D. C.: Star-nosed mole, *Condylura*, from Silver Spring, Md. (50760).
- RACOVITZA, Dr. EMILE G., Sorbonne, Paris, France: 12 species of isopods, cotypes, from caves (51085: exchange).
- RAGAN, Mrs. W. H., Anacostia, D. C.: Chinese sandalwood-stick fan with peacock-eye feathers (50576).
- RANSOM, Miss IRENE, Cleveland, Ohio: Portrait of Salmon P. Chase, by Miss C. L. O. Ransom (51550: loan).
- RAU, WILLIAM H., Philadelphia, Pa.: Photograph of Dr. Samuel G. Morton, from an oil portrait in the Academy of Natural Sciences (51574: purchase).
- RAVENEL, S. D., Valdosta, Ga.: Chicken with four well-formed legs and feet (50554).
- REAGAN, ALBERT B., La Push, Wash.: About 300 specimens, including a number of types, of Tertiary fossils from the Olympic Peninsula (50625; 50795).
- REIFF, WILLIAM, Forest Hills, Mass.: 6 moths (51330).
- REULING, Dr. GEORGE, Baltimore, Md.: 13 historical paintings of the early American school (51498); portraits of Sargent Wallace, by Neagle; of Henry Clay, by Rembrandt Peale, and of Mrs. Lloyd, by Gilbert Stuart (51703). Loan.
- REYNOLDS, ALLEN JESSE, Council Grove, Kans.: Specimen of fossil wood from near Council Grove (50913).
- RHODES, CHARLES M., Brentwood, Long Island, N. Y.: Marble tile from the floor of a Pompeian house (51681).
- RHODESIA MUSEUM. (See under Bulawayo, British South Africa.)
- RICE, ARTHUR P., Progreso, Yucatan, Mexico: A complete costume and outfit worn by the present Maya Indian in the fields or woods (51549).
- RICHARDSON, Mrs. THOMAS F., Washington, D. C.: 20 pieces of old laces; a cloisonné deer, supposed to be of the 9th century; a kissing plate; painting on parchment, of the 15th century; a commemoration glass, 1797; and 2 pieces of silver (51238: loan).
- RICHMOND, Dr. C. W., U. S. National Museum: Portrait of "Karl, Groshertzog von Frankfurt, Fürst Primas des Rheinbundes" etc. (50447).
- RICKER, P. L., Department of Agriculture, Washington, D. C.: 8 plants from Texas (51579).
- RIGDEN, Miss EFFIE J., Oakland, Cal.: Ostracods, *Cypris globulus* (50744).
- ROBERTS, BARTON, U. S. National Museum: A small pocket revolver (51366).
- ROBINSON, Hon. C. H., Chicago, Ill.: Metate from Swan Lake, Iowa (51678: exchange).
- ROBINSON, GRIFFITH M., National Soldiers' Home, Tenn.: Sample of crystallized galena with sphalerite and chalcopyrite, from Red Dog Mine, Webb City, Mo. (50564).
- ROBINSON, T. R., Washington, D. C.: Specimen of a fungus from Virginia (50708).
- ROBINSON, Maj. WIRT, U. S. Army, West Point, N. Y.: A cat and an otter from Merida, Venezuela (51311); 38 insects from the Philippine Islands (51443); 9 insects and a milleped (51501).

- RODGERS, W. C., Nashville, Ark.: Specimen of kaolin from Pike County, Ark. (50565); specimens of diamond-bearing peridotite rock from Pike County (50676).
- RODGEZ, Dr. VAL R., Jayuya, Porto Rico: Specimen of red hematite from near Mameyes de Utuado, Porto Rico (51324).
- ROHWER, S. A., Department of Agriculture, Washington, D. C.: Collection of Tenthredinoidea and Siricoidea, consisting of about 400 specimens and representing about 250 species with types or paratypes of 50 species (51445).
- ROIG, MARIO SANCHEZ, Havana, Cuba: About 30 insects (51502).
- ROMINE, E. T., Owego, N. Y.: 35 specimens of Devonian fossils from Owego (50357).
- ROOD, ALMON N., Phalanx, Ohio: Specimen of *Lycopodium* from Ohio (50520); 20 specimens and 3 photographs of ferns from Ohio (51202: exchange).
- ROSENBERG, W. F. H., London, England: 106 birds' skins from Mount Ruwenzori, Uganda (50370; 50401; 50423); 9 mammals from Africa and Australia (50799); skin of a Venezuelan bear, *Ursus ornatus* (51511). Purchase.
- ROUSSELET, CHARLES F., London, England: 48 slides of Rotifera (50965; 51593). Purchase.
- ROUX, Dr. JEAN, Naturhistorisches Museum, Basel, Switzerland: Frog from German East Africa (51191: exchange).
- ROWLETT, Mrs. S. C., Randolph, Va.: 2 plants, *Thalictrum* and *Psoralea* (50284); specimen of *Thalictrum*, and 3 plants from Virginia (50649; 51632).
- ROYAL ENGRAVING COMPANY, New York City: 18 specimens of process color printing (50339).
- ROZYCKI, STEPHEN, Washington, D. C.: A semialbino golden-crowned kinglet, *Regulus satrapa*, from Pittsboro, N. C. (50952).
- RÜCKBEIL, W., Dzarkent, Semirychensk, Russian Turkestan: 16 small mammals and a bird from Russian Turkestan (51175: purchase).
- RUFFIN, J. N., Buenos Aires, Argentina: 2 skins and skulls of a Paraguayan deer, *Odocoileus dichotoma* (50462); Chaco Indian hatchet from Argentina (50777); mounted albino specimen of a South American ostrich, *Rhea darwini* (51601). Purchase.
- RUSH, FRANK, Cache, Okla.: Lizard, *Crotaphytus collaris*, from Oklahoma (50510).
- RUTH, ALBERT, Fort Worth, Tex.: 185 plants from Texas (51127: exchange).
- RUTHERFORD, W. G., London, England: Specimen of beekite and 3 scotch agates (51646: exchange).
- SAINTAUREUS, D. M., Camden, N. J.: 4 living specimens of Cactaceæ (51121: exchange).
- ST. PETERSBURG, RUSSIA, MUSÉE D'ANTHROPOLOGIE ET D'ETHNOGRAPHIE DE PIERRE LE GRAND: 33 photographs of the Yenissei tribe, Siberia (51225); collection of Turkestan pottery (XI-XIV centuries), and bust, in plaster, of a member of the Yenissei tribe (51409). Exchange.
- SAMPSON, F. R., Weehawken, N. J.: Confederate States bond for \$500.00 (50869).
- SANFORD, J. N., Elbow Lake, Minn.: Albino jumping mouse (50646: purchase).
- SAUNDERS, C. F., Santa Fe, N. Mex.: 4 plants from Arizona (50583).
- SCHLÜTER, WILH., Halle a Saale, Germany: 2 specimens of *Mustela sarmatica* (50800); 8 skins of birds of paradise (51589). Purchase.
- SCHMID, E. S., Washington, D. C.: Egg of the gray parrot, *Psittacus erithacus* (51023); 2 parrots, *Amazona oratrix* (51544).
- SCHMITZ, E. P., Washington, D. C.: Parrot, *Amazona leucocephala*, from Isle of Pines, Cuba (50405).
- SCHÜTENSACK, Prof. OTTO, University of Heidelberg, Heidelberg, Germany: Cast of the "Heidelberg jaw" (50804).

- SCHULMAN, Prof. HJ., Gerknäs, Finland: 10 specimens of small Finnish mammals (51726: exchange).
- SCHWALBE, Prof. GUSTAV, University of Strassburg, Strassburg, Alsace, Germany: 6 anatomical specimens (51153: exchange).
- SCHWARZ, E. A., Department of Agriculture, Washington, D. C.: Land and freshwater shells from Mexico, representing 17 species (51171); 200 specimens of Coleoptera from eastern Peru, collected by Carlos Schunke (51403).
- SCIDMORE, Miss E. R., Washington, D. C.: Chinese and Japanese ceramics and rosaries (51610); Japanese ceremonial knots, and 2 books on knots (51690). Loan.
- SCOFIELD, C. S., Lanham, Md.: 4 specimens of fungus, *Elaphomyces granulatus*, from Lanham (51277).
- SCOTT, WILLIAM A., Shields, Mont.: Small specimens of sapphires and a small uncut ruby (51188).
- SEAMAN, JOHN F., Tukumcari, N. Mex.: Fossil teeth and bones from New Mexico (51205).
- SEBASTIEN, E., St. Thomas, Danish West Indies: Specimen of basket fish, *As-trophyton costosum* (51368).
- SEMPERS, J. FORD, Aiken, Md.: Specimen of a plant, *Micranthelia lobata*, from Maryland (50849).
- SEWARD, Estate of OLIVE RISLEY (through Miss Sara Carr Upton, Washington, D. C.): 4 cloisonné enamels, a cinnabar lacquer box, and a Roman terra cotta head (50608: loan).
- SHACKLETON, Sir ERNEST HENRY, London, England: Geological specimens secured on the Antarctic Expedition (51390).
- SHARPE, R. W., Brooklyn, N. Y.: Copepods, types of *Ilyopsyllus sarsi*; ostracods, types of *Cyprinotus dentata* (50538).
- SHAW, IKE, & COMPANY, Fort Myers, Fla.: Round-tail muskrat, *Neofiber alleni* (51189).
- SHELFORD, V. E., University of Chicago, Ill.: 48 vials of isopods (51064); 2 specimens of myriapods (51291).
- SHERMAN, JOHN D., jr., Brooklyn, N. Y.: About 1,000 Coleoptera from Japan (50615: exchange).
- SHREVEPORT COTTONWOOD COMPANY, Limited, Shreveport, La.: Fossil tooth of a horse (50417).
- SIGGINS, Miss JUSTINA S., West Hickory, Pa.: Shed skin of a gartersnake, *Eutaenia sirtalis* (51217).
- SILVERMAN, Dr. JOS. A., Kodiak, Alaska: Shells of the species *Chrysodomus liratus* and *Beringius kennicotti*; a large starfish belonging to the genus *Pycnopus*, and 6 stones encrusted with bryozoans and worm tubes (51639); skull of a bear, *Ursus middendorffi* (51722).
- SINCLAIR, Prof. W. J., Princeton University, N. J.: About 200 specimens of Pliocene ostracods from Contra Costa County, Cal. (51144).
- SLATER, Mrs. W. A., Washington, D. C. (through Mrs. James W. Pinchot): Piece of modern Burano lace (51707: loan).
- SLOAN, HENRY, Sinclairville, N. Y.: Nest of ruby-throated hummingbird, with mummies of two young birds (50737).
- SMITH, Misses ALICE and HENRIETTA. (See under Mrs. Harold Dillingham.)
- SMITH, Dr. HUGH M., Bureau of Fisheries, Washington, D. C.: 2 eggs of *Caprimulgus* from Santa Cruz Island, Philippines (51077); Kaffir fly-whip from Grahamstown, South Africa (51287); trinket basket made by the Vagos of Sobran, Northern Luzon, P. I. (51465).
- SMITH, Prof. J. B., Rutgers College, New Brunswick, N. J.: 6 specimens of Hymenoptera representing the species *Emphor bombiformis* (50751).
- SMITH, R. J., Milpitas, Cal.: 3 sheets of *Equisetum* from California (50355); 39 specimens of *Equisetum* from California (50702).

SMITHSONIAN INSTITUTION:

Commemorative medal issued in honor of the tercentennial of the discovery of Lake Champlain (50361); bronze medal struck to commemorate the centennial festival of the University of Oviedo, Spain, and presented by the Rector of the University through the Spanish Minister at Washington (50546); replica, in silver, of gold medal awarded during the IV Latin-American Medical Congress, Rio de Janeiro, 1909, to Dr. Oswaldo Cruz, in recognition of his distinguished medical services on behalf of his country and humanity (50832); plant from Guatemala, received from Capt. John Donnell Smith (51300); a bronze medal presented by the National Battlefields Commission in commemoration of the tercentenary of the founding of Quebec by Champlain, 1908 (51533); a medal commemorating the third centenary of the canonization of St. Charles Borromeo, 1910, presented by Signor Stefano Carlo Johnson, Milan, Italy (51555); 20 unit drawers of Cambrian fossils collected near Vermilion Pass, near Ptarmigan Pass, and at various other points in and near the Bow River Valley, Alberta, Canada, by Dr. Charles D. Walcott during the field season of 1909 (51566); casts of 2 specimens of *Olenellus*-like forms obtained from Mr. Frank Raw, Birmingham, England, and figured and described by him (51567); 5 drawers of Cambrian fossils and 9 drawers of Ordovician and Silurian fossils from the region east of Ogden, Utah, collected during the field season of 1909 by Mr. J. M. Jessup (51568); collection of Lower Cambrian fossils made by Dr. Charles D. Walcott in Lancaster County, Pa., during the winter of 1909 (51569); 20 drawers of Cambrian fossils from Manchuria, obtained during the winter of 1909 by Mr. J. P. Iddings (51570); about 100 casts of type and figured specimens of Cambrian fossils used by Dr. Charles D. Walcott during the preparation of a paper describing the various forms of Mesonacidae (51571).

SMITHSONIAN INSTITUTION—Continued.

Smithsonian African Expedition, under the direction of Col. Theodore Roosevelt: Collections made in British East Africa and received during the year, comprising approximately the following specimens: 550 large and 3,450 small mammals, 2,750 birds, 1,800 reptiles, 100 fishes, 5,000 invertebrates, including insects, mollusks, crustaceans, etc.; 5,000 plants and a small amount of anthropological material (50755; 50756; 50757; 50827; 51209; 51304; 51495).

Bureau of American Ethnology: About 1,000 archeological objects collected by Dr. J. Walter Fewkes in 1909, in connection with the excavation and repair of "Cliff Palace," in the Mesa Verde National Park, Colo., under joint agreement between the Interior Department and the Smithsonian Institution (50765); stone arrow points made by George Kurtley, Tuxedo Park, Md., and presented by him to the Bureau (50813); Shalako mask horns forwarded by Stewart Culin, from collections left by Frank H. Cushing in care of the Free Museum of Science and Art, Philadelphia (50814); buckskin shirt with porcupine quill ornamentation, made by the Arapaho-Grosventre (alias Atsina) tribe of the northern part of Montana, purchased for the Bureau from Arnold Woolworth by James Mooney (50815); pottery fragments from a village site near Sutherland, Iowa, presented by W. A. Brady, Sutherland, Iowa (50816); old Shaker pipe obtained from the North family, Union village, Warren County, Ohio, and presented by J. P. MacLean, Franklin, Ohio (50817); flaked stones from Piney Branch quarries, District of Columbia (50971); archeological objects collected by Dr. J. Walter Fewkes in 1909 in the Marsh Pass region, Arizona (50972); wooden mortar and pestle obtained from the Pamunkey Indians of Virginia by James Mooney (50973); articles, presumably of Eskimo origin and consisting of a seal-skin packing case, a burial case of

SMITHSONIAN INSTITUTION—Continued.

birch bark containing supposedly charred human remains, a basket, a bone scraper, 3 wooden dishes, a wooden box, tooth of a mammoth, and 2 fragments of a mammoth's tusk (50974); fragments of 2 soapstone dishes and a hammer stone from Virginia (50975); a large transparency representing Canyon del Muerto, Ariz., and 7 oil paintings by King and Ulke representing portraits of Indian chiefs (50976); 25 photographs of objects in the collection of Mr. J. A. Chisholm, Puebla, Mexico (51459); stone club from the State of Washington, procured from E. A. Post, Gate, Wash. (51692).

National Museum, collected by members of the staff: Bartsch, Paul: 3 birds' nests from the Philippine Islands (50362); insects from the Philippine Islands collected during the Albatross Philippine Expedition (50789); skin of *Iole gularis* from the Philippine Islands (51546); 2 snakes and a batrachian from Great Falls, Va. (51605). Bassler, R. S.: About 300 specimens of Ordovician and Silurian fossils from the Ohio Valley (50396). Bean, B. A.: Fishes from Key West and Lake Monroe, Fla. (51682; 51683). Bell, E. W.: 2 young specimens of *Mus musculus* (50585). Crawford, J. C.: 46 specimens of Hymenoptera, and 30 specimens of insects from Plummer's Island, Md. (51394; 51496); 14 specimens of *Bombus*, including the type of a new species (51434). Dall, W. H.: An Indian skull from San Miguel Island, Cal. (50811); hydroids and an ostracod from San Pedro Harbor, Cal., collected by E. L. Eshnaur (51080). Hrdlička, A.: 60 plants from Egypt (50385); insects from Egypt (50532); about 30 specimens from Egypt, consisting of mammals, reptiles, scorpions, and a bird (50673). Laney, F. B.: Specimen of amblygonite and 3 specimens of lepidolite (50415); specimen of calcite from High Hill Mine, Virgilina, Va. (50461). Maxon, W. R.: 100 plants from central New York (50484); 900 specimens of marine algae from Massachusetts (50573); 30 plants from Maryland (50721). Merrill, G. P.: 2 specimens of granite from

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near White Plains, N. C. (50317); pegmatite from feldspar quarries, Mount Apatite, Auburn, Me. (50456); specimens of talc from quarries of the Cuthbert Land and Development Company, near Wiehle, Va. (50509); 4 specimens of gabbro and diorite from near Bethesda, Montgomery County, Md. (50805). Miller, Gerrit S., jr.: Specimen in alcohol of brown bat, *Eptesicus fuscus* (50459). Peale, A. C.: 350 fossil plants from the Laramie and Fort Union formations of Wyoming and Colorado (51192). Pogue, J. E., jr.: Samples of talc from quarries of the Cuthbert Land and Development Company, near Wiehle, Va. (50509). Rathbun, Miss M. J.: Specimens of surface towings from Sunday River, Oxford County, Me. (50536). Riley, J. H.: Skin and skull of a weasel, *Putorius* (50446); birds and crustaceans from Smith's Island, Va. (50526); specimen of hybrid duck, *Cairina moschata* + *Anas boschas* (51022); specimen of a young rabbit, *Sylvilagus f. mallurus*, from Falls Church, Va. (51352); 3 birds' skins (51416); 84 birds' skins, crustaceans, and skull of a cetacean representing the species *Tursiops truncatus*, collected at Smith's Island, Va. (51561); 54 birds' skins from Virginia (51637). Rose, J. N.: Living cactus from New Mexico (50350); 200 specimens of living plants, mainly cacti, from the southwestern part of the United States and Mexico (51275; 51299); 175 plants, mainly living cacti, from Mexico (51307; 51329; 51363); dried plants from Mexico (51370); 103 specimens of plants, mainly living, from Mexico (51378; 51420; 51455; 51463); 3 lizards and a snake from Mexico (51595); about 10,000 plants, chiefly from the western coast of Mexico (51674); a mummied hummingbird representing the species *Calypte costae*, from Mexico (51675). Standley, Paul C.: 4 living specimens of cacti from New Mexico (51492). Steele, E. S.: 4 living plants from Indiana (50567); 50 specimens of plants from the vicinity of Washington, D. C. (51343); 730 plants from Wisconsin, Illinois, and

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Indiana (51556). Stejneger, Leonhard: Reptiles, batrachians, lizards, isopods, and specimen of flathead minnow, *Pimephales notatus*, from Delaplane, Va. (50613). True, F. W.: Material, chiefly bones of vertebrates, from shell heaps of Brooklin, Me., and vicinity; also salamanders, earthworms, myriapods, and terrestrial isopods from the same locality (50601); skull and partial skeleton of a domestic sheep from Marshall Island, Hancock County, Me. (50826). Weed, A. C.: Fishes, reptiles, insects, mollusks, invertebrates, and plants from Sodus Bay, N. Y. (50505); fishes from the District of Columbia, and leeches from the fins of fishes caught near Chain Bridge, D. C. (50845); fishes and 2 specimens of crayfishes from Cabin John Run, Md. (50892); fishes and crustaceans collected in the District of Columbia (50921); snake from Washington, D. C. (51344); 2 earthworms from Washington, D. C. (51392); 2 leeches and 5 earthworms from the District of Columbia (51433; 51490); fishes from the District of Columbia and Chesapeake Beach, Md.; 3 tadpoles from the eastern branch of the Potomac River; and an insect from Cabin John Run, Md. (51719); 3 crabs and a shrimp from Chesapeake Beach, Md. (51730).

National Zoological Park: European blackbird, *Morula morula* (50299); Florida cormorant, *Phalacrocorax diolophus floridanus*; Sarus crane, *Grus antigone*; Diana monkey, *Cercopithecus diana*; Amazon parrot, *Amazona panamensis* (?); leopard, *Felis pardus*; striped hyena, *Hyena striata* (50300); fishing cat, *Felis viverrina*; Japanese deer, *Cervus sika*; red deer, *Cervus elaphus*; fallow deer, *Cervus dama*; 2 specimens of mule deer, *Odocoileus hemionus*; marten, *Mustela americana*; black-striped wallaby, *Macropus dorsalis* (50301); bald eagle, *Haliaetus leucocephalus*; barn owl, *Strix pratincta*; 3 specimens of laughing gull, *Larus atricilla*; white-throated capuchin, *Cebus hypoleucus*; great blue heron, *Ardea herodias* (51030); curassow, *Craz*

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panamensis; Burmeister's caracara, *Chunga burmeisteri*; screech owl, *Megascops asio*; lory, *Platycercus palliceps*; 2 specimens of European flamingo, *Phoenicopterus antiquorum*; white crowned dove, *Columba leucocephala*; California partridge, *Callipepla californica* (51031); 3 specimens of aoudad, *Ovis tragelaphus*; common skunk, *Mephitis mephitis* (51032); collared peccary, *Dicotyles tajacu*; 2 specimens of mule deer, *Cariacus macrotis*; llama, *Auchenia glama*; crab-eating fox, *Canis cancrivorus*; gray spider monkey, *Ateles geoffroyi* (51033); elk, *Cervus canadensis* (51034); grison, *Galictis vittata*; bobcat, *Lynx rufus maculatus* (51035); kangaroo, *Macropus robustus*; Malabar squirrel, *Sciurus indicus*; cougar, *Felis concolor*; grison, *Galictis vittata*; mona monkey, *Cercopithecus mona* (51036); diamond rattlesnake, *Crotalus adamanteus*; gila monster, *Heloderma suspectum*; pine snake, *Pituophis melanoleucus* (51037); Pacific rattlesnake, *Crotalus lucifer*; banded rattlesnake, *Crotalus horridus* (51049); European hedgehog, *Erinaceus europæus*; banded rattlesnake, *Crotalus horridus*; pine snake, *Pituophis melanoleucus* (51050); western porcupine, *Erithizon epixanthum* (51051); 2 specimens of hutia-conga, *Capromys pilorides*; 2 specimens of Tasmanian wolf, *Thylacynus cynocephalus*; Malay tapir, *Tapirus indicus*; capybara, *Hydrochærus capybara*; opossum, *Didelphis*; hairy armadillo, *Dasypus villosus* (51052); pine snake, *Pituophis melanoleucus*; diamond rattlesnake, *Crotalus adamanteus*; coach-whip snake, *Bascanium flagelliforme* (51086); European hedgehog, *Erinaceus europæus*; golden eagle, *Aquila chrysaetos* (51087); woolless sheep, *Ovis aries-tragelaphus* (51088); reindeer, *Tarandus rangifer* (51089); American crocodile, *Crocodylus americanus*; diamond rattlesnake, *Crotalus adamanteus*; pine snake, *Pituophis melanoleucus* (51095); roseate spoonbill, *Ajaja ajaja*; gray parrot, *Psittacus*; Patagonian rhea, *Rhea darwini* (51096); ocelot, *Felis pardalis* (51097); mule deer, *Cariacus macrotis*; Mexican curassow, *Craz globicera*

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(51098); fishing cat, *Felis viverrina*; chamois, *Rupicapra tragus*; Barbados sheep, *Ovis aries-tragelaphus* (51099); gopher snake, *Spilotes corais couperii*; 2 Florida rattlesnakes, *Crotalus adamanteus*; gila monster, *Heloderma suspectum*; diamond rattlesnake, *Crotalus adamanteus*; water moccasin, *Ancistrodon piscivorus* (51666); screech owl, *Megascops asio*; 2 jabiru storks, *Mycteria americana*; ostrich, *Struthio camelus*; egret, *Ardea egretta*; Chinese goose, *Anser cygnoides*; spoonbill duck, *Spatula clypeata*; purplish guan, *Penelope purpurascens*; maned goose, *Chenonetta jubata*; butcher crow, *Cracticus destructor*; pigeon parakeet, *Palæornis columboides* (51667); pine marten, *Mustela americana*; elk, *Cervus canadensis*; coyote, *Canis latrans*; rock kangaroo, *Petrogale penicillata*; jaguar, *Felis onca*; barn owl, *Strix pratincola*; red-shouldered hawk, *Buteo lineatus*; whooping-crane, *Grus americana*; parakeet, *Brotoperyx jugularis*; pelican, *Pelecanus erythrorhynchus* (51668); llama, *Auchenia glama*; marmosette, *Hapale* sp.; leopard cat, *Felis bengalensis*; mule deer, *Odocoileus hemionus*; hutia rat, *Capromys*; fallow deer, *Cervus dama*; spotted cavy, *Catagenys paca*; harbor seal, *Phoca vitulina*; hedgehog, *Erinaceus europæus*; axis deer, *Cervus axis* (51669); hedgehog, *Erinaceus europæus*; eland, *Taurotragus oryx*; jaguar, *Felis onca*; Arabian camel, *Camelus dromedarius*; coati, *Nasua narica*; marmosette, *Hapale* sp.; 2 specimens of gray spider monkey, *Ateles geoffroyi*; tayra, *Galera barbara*; black leopard, *Felis leopardus* (51670); goat, *Capra hircus*; Rocky Mountain sheep, *Ovis canadensis* (51713).

SNYDER, C. P., Hot Springs, Alaska: Specimens of cassiterite, oxide of tin, from Paterson Creek, Alaska (50458).

SNYDER, W. E., Beaver Dam, Wis.: 9 specimens of *Strobilops affinis* from Beaver Dam (51021).

SOMES, M. P., Iowa City, Iowa: 626 plants collected in Iowa (51614: exchange).

SOUTH BEND WATCH COMPANY, South Bend, Ind.: Watch made by the South Bend Watch Company, and a model of the mechanism of a clepsydra (51272).

SOWERBY, ARTHUR DEC., Tai-yuan-fu, Shansi, North China: Mammals, birds, reptiles, and fishes from the Provinces of Shensi and Shansi, China, and the Ordos Desert (50828); mammals, fishes, reptiles, and crabs from the Province of Shensi, China (50829); mammals, birds, reptiles, crabs, insects, and samples of coal from the northwestern part of China (50872); 54 small Chinese mammals (51357); scalp and skull of a pig, and skull of an antelope, from north of Peking (51640). Collected for the Museum.

STANARD, C. D., Casey, Iowa: Photograph of the tooth of a mastodon (50418).

STANDLEY, MRS. FLORENCE A., Springfield, Mo.: Specimen of *Cynthia virginica* from Missouri (50501).

STANDLEY, Miss NELLIE, Springfield, Mo.: 5 living specimens of *Opuntia* from Missouri (50632).

STANTON, Dr. T. W., U. S. Geological Survey, Washington, D. C.: Land shells from Wyoming (50714).

STARKS, HARRIET M., South Manchester, Conn.: Specimen of *Limax maximus* from South Manchester (50373).

STATE DEPARTMENT. (See under Frank Deedmeyer, Frederick Girbal, and Frederic W. Goding.)

STEARNS, ELMER, El Paso, Tex.: 2 specimens of Cactaceæ from Texas (50477).

STEARNS, H. G., North Yakima, Wash.: Obsidian knife (50717: purchase).

STEARNS, Miss MARY R., Los Angeles, Cal.: Electrotypes and manuscript relating to the Mollusca, which belonged to the late Dr. R. E. C. Stearns (50642).

STEGE, A. M., Washington, D. C.: Specimen of quartz with black tourmaline, and 2 specimens of gabbro (50796).

- STERNBERG, CHARLES H., Lawrence, Kans.: Fossil crocodile skull (50700); skull of *Clidastes* (51012). Purchase.
- STERRETT, D. B. (See under J. B. Endicott.)
- STEVENSON, MRS. M. C., Bureau of American Ethnology, Washington, D. C.: A Zuñi spindle (51456). (See under Domingo Gonzales.)
- STOCKHOLM, SWEDEN, NATURHISTORISKA RIKSMUSEUM: 276 specimens of named Diptera (50905: exchange).
- STONE, R. W., U. S. Geological Survey: Several pounds of twinned orthoclase crystals (51072).
- STOWE, HORACE E. (See under Miss Susan Ames.)
- STRANGMAN, HARRY W., Tanana, Alaska: Specimen of *Megarhyssa nortoni* from Alaska (50496).
- STRETCH, R. H., Seattle, Wash.: 120 specimens of insects (51245); 20 specimens of Coleoptera (51273).
- SULZBERGER, D., Philadelphia, Pa.: Mezzotint of John Randolph, by Sartain (50448).
- SULZER, CHARLES A., Sulzer, Alaska: 2 specimens of molybdenite (50288).
- SWAINE, F. G., & SON, Washington, D. C.: Specimen of long-eared owl, *Asio wilsonianus*, from Loudoun County, Va. (50855).
- SWEZEY, OTTO H., Hawaiian Sugar Planters' Association, Honolulu, Hawaii: 80 bred Hawaiian Microlepidoptera (51269); 60 specimens of Microlepidoptera from Hawaii (51519).
- TALMAGE, DR. J. E., Salt Lake City, Utah: 5 specimens of insects, *Anabrus simplex* (50464, 50596).
- TASSIN, WIRT, Chester, Pa.: 8 small samples of diamond crystals and bort (51075).
- TAYLOR, ELFREDA B., Thomasville, Ga.: 3 specimens of *Chenopodium* from Georgia (50476).
- TAYLOR, Rev. G. W., Biological Station, Departure Bay, Nanaimo, British Columbia: Type specimen of barnacle, *Scalpellum columbianum*, from Lowe Inlet, British Columbia (50523); 2 specimens of *Gastropteron pacificum* (50640).
- TAYLOR, J. E., Washington, D. C.: Tortoise from Florida (51382).
- TAYLOR, W. E., Norfolk, Va.: Cranium of a skate; pharyngeal bone of an angler, *Lophius* (50295).
- TAYS, E. A. H., San Blas, Sinaloa, Mexico: Specimen of *Sedum alamosanum* (51572); specimen of palm from Mexico (51634).
- THAYER, Hon. JOHN E., Lancaster, Mass.: 132 sets, 268 eggs, of Heermann's gull, *Larus heermanni*, from Lower California (50403); 34 skins of Chinese birds (51267). Exchange.
- THIÉRY, M. P., Chaumont, Haute-Marne, France: 40 specimens representing 30 species of Echinoids (51658: exchange).
- THOMPSON, Miss A. G., Washington, D. C.: Notes and tracings relating to the history of the violin (50334).
- THOMPSON, J. C., Imperial, Cal.: 2 snakes, *Chionactis*, from California (51356).
- THOMPSON, Mrs. J. C., Ardmore, Okla.: 12 specimens of earthworm (50293).
- THOMPSON, W. R., Gipsy Moth Parasite Laboratory, Melrose Highlands, Mass.: 4 specimens, types of *Leucopis maculata* (51448).
- THORN, WALTER. (See under Medal of Honor Legion of the United States of America.)
- THORNBURGH, VERN, Lincoln, Nebr.: 64 flint scrapers (50467: exchange); 33 scrapers and knives (50545: exchange); 3 prehistoric stone implements from Umatilla County, Ore. (50589: exchange); stone knife or scraper from Durkee County, Ore. (50716); stone pipe from a grave in Cumberland County, Ky. (50810: exchange); a stone pipe from Nebraska (51054: exchange); a banded slate pendant or charm (51110: exchange); a gorget, a pendant, and a bannerstone from Ohio (51226: exchange).

- TONDUZ, A., San José, Costa Rica: 2 specimens of *Polakowskia* from Costa Rica (50851).
- TOPPING, D. LE ROY, Manila, P. I.: About 500 ferns from the Philippine Islands (50332).
- TOWNSEND, C. H. T., Gipsy Moth Parasite Laboratory, Melrose Highlands, Mass.: 3 plants from Chihuahua, Mexico (50634).
- TOWNSEND, THOMAS GERRY (through Francis B. Poe, Washington, D. C.): Collection of "Cincinnati" china made for David Townsend, together with Revolutionary relics of the Townsend and Gerry families; also manuscripts, etc. (50710: loan).
- TRACY, S. M., Biloxi, Miss.: Specimen of living cactus, *Opuntia*, from Mississippi (51339).
- TRASK, MRS. BLANCHE, Avalon, Catalina Island, Cal.: Tertiary fossils from shale, Catalina Island (50903).
- TREASURY DEPARTMENT:
Material obtained through the U. S. Public Health and Marine-Hospital Service:
Calcutta, India: 36 specimens of rats, *Mus norvegicus* and *M. alexandrinus*; also bandicoots, *Gunomys bengalensis* and *Nesokia nemorivagus* (50398).
Guayaquil, Ecuador: 26 bats from Guayaquil (50437).
Halifax, Nova Scotia: 16 rats, *Mus norvegicus*, from Nova Scotia (50306; 50416); 4 rats, *Mus norvegicus*, and 25 bats, *Myotis lucifugus* (50463); 14 bats, *Myotis lucifugus*, from Nova Scotia (50558).
Ketchikan, Alaska: 2 rats, *Mus norvegicus*, and a flying-squirrel, *Sciuropterus* (50307); 3 bats, *Myotis*, from Alaska (50711).
- TREMPER, Dr. R. H., Ontario, Cal.: Unique type specimen of *Cymatium corrugatum* var. *tremperi* from San Pedro, Cal.; depth 42 fathoms (51314).
- TRISTÁN, Prof. J. FID, San José, Costa Rica: 2 vials of isopods (50598); 10 specimens representing 2 species of isopods from Costa Rica (51084).
- TRUE, Dr. F. W., U. S. National Museum: Fragmentary stone axe (50787). (See also under National Museum.)
- TUCKER, E. S., Washington, D. C.: 4 specimens of Hymenoptera, including 3 types (51041); about 300 specimens of Hymenoptera (51184).
- TUCKERMAN, Miss EMILY, Washington, D. C.: 6 pieces of tapestry and a Persian rug (51468: loan).
- TULARE MINING COMPANY, Porterville, Cal., (through W. P. Bartlett, superintendent): 2 specimens of magnesite from quarries near Porterville (50932).
- TURBYFILL, M. B., Culpeper, Va.: Specimen of scavenger beetle, *Dynastes tityus* (50730).
- UMATILLA COUNTY ANGLERS' ASSOCIATION (through C. K. Cranston, secretary), Pendleton, Oreg.: Specimen of steelhead salmon, *Salmo gairdneri*, and specimen of silver salmon, *Oncorhynchus kisutch*, taken in the storage reservoir of the Umatilla Irrigation Project at Hermiston, Oreg. (50950).
- UMBACH, Prof. L. M., Naperville, Ill.: Specimen of *Cynthia* from Indiana (50475); 62 specimens of Juncaceæ from various localities (51280).
- UPTON, Miss SARA CARR. (See under Seward, Olive Risley, Estate of.)
- VAN DINE, D. L., Department of Agriculture, Washington, D. C.: 72 specimens of Hymenoptera (51141).
- VAN DUZEE, E. P., Buffalo, N. Y.: 6 specimens of Hemiptera, including a cotype of *Peregines costalis* (50750: exchange).
- VERCO, Dr. Jos. C., Adelaide, South Australia: Marine shells representing 41 species and varieties from South Australia, cotypes of species described by the donor (51288).
- VERRILL, Prof. A. E., New Haven, Conn.: Jellyfish, *Nectopilema* (50862: purchase).
- VIENNA, AUSTRIA, K. K. NATURHISTORISCHES HofMUSEUM: 100 specimens (century 17) of cryptogams from various localities (51232: exchange).

- VINCENT, DR. THOMAS N., Washington, D. C.: A Sèvres vase presented to the late Prof. Julius E. Hilgard by the French Government for his services on the International Metric Commission, Paris, 1872 (51470: loan).
- WAGGAMAN, W. H., Bureau of Soils, Department of Agriculture, Washington, D. C.: Phosphate rock from Cokeville, Wyo. (50457: collected for the Museum).
- WALCOTT, DR. CHARLES D., Smithsonian Institution: Elk, *Cervus*, and a black-tailed deer, *Odocoileus*, from Montana (51092).
- WALCOTT, CHARLES D., jr., Provo, Utah: Skin of a gray ruffed grouse, *Bonasa umbellus umbelloides* from Utah (50884).
- WALCOTT, SIDNEY S., Washington, D. C.: 6 trays of butterflies collected by the donor in the northern part of Montana (51522).
- WALKER, FRED. W., Macon, Ga.: 2 flint implements (50310); 4 salamanders from Bibb County, Ga. (51316: exchange).
- WALKER, MRS. SOPHIE LIEBENAU, Alexandria, Va.: A German "beauty bottle" and a small carved ivory head (51236).
- WALLIS, W. W., U. S. National Museum: A watch movement (50743); 3 crabs and a shrimp from Chesapeake Beach, Md. (51730).
- WALTON, W. R., Harrisburg, Pa.: 2 type specimens of *Dasyllis champlainii* (51618).
- WANNER, Prof. ATREUS, York, Pa.: 33 specimens of Lower Cambrian trilobites from Lancaster County, Pa. (51591: exchange).
- WAR DEPARTMENT:
Army Medical Museum: Barn owl, collected by Dr. J. W. Downey, at Monrovia, Frederick County, Md. (50611); specimen of lizard, *Colotes marmoratus*, collected near Camp John Hay by Sergt. James F. Hamner, Hospital Corps, U. S. Army, Benguet, P. I. (50677); anatomical specimens and ethnological material (51413).
- WARMBATH, J. S., Washington, D. C.: Skin of a Greenland seal (50424: purchase).
- WARNER, Miss ANNA P., Maywood, Nebr.: Fragments of pottery from Frontier County, Nebr. (51237).
- WARREN, EDWARD R., Colorado Springs, Colo.: Lizard from Colorado (51337).
- WASHINGTON BIOLOGISTS' FIELD CLUB, Washington, D. C.: Specimens of bryozoans, *Pectinatella*, from Plummers Island (50690); 500 insects collected in 1909 (51399).
- WASHINGTON, CHARLES S., U. S. National Museum: Terrestrial isopods from the District of Columbia (50383); frog from Maryland (50511); living specimens of insects and isopods (50616).
- WATERMAN, JASON, Washington, D. C.: The herbarium of Mrs. Emily S. Waterman, comprising 285 specimens of United States plants (51451).
- WEBB, CHARLES W., Osprey, Fla.: 3 specimens of Hymenoptera (Mutillidae) (50367).
- WEBB, JOHN S., Disputanta, Va.: Specimen of "glass snake," *Ophisaurus ventralis*, from Chuckatuck, Va. (50495).
- WEBB, WALTER F., Rochester, N. Y.: 2 specimens of alcyonarian corals, *Melitodes* sp., from Japan (51149).
- WEBER, CHARLES, Puerto Princessa, Palawan, P. I.: About 150 butterflies (50304).
- WEED, OSCAR S., North Rose, N. Y.: 20 specimens of fishes representing the species *Esox vermiculatus* and 4 specimens representing the species *Amiurus nebulosus*, from the head of Sodus Bay, New York (51198).
- WEINBERG, FRANK, Woodside, L. I.: Living specimen of *Cereus martianus* (50320); 22 living plants, mainly Cactaceae and Crassulaceae (51124: exchange).
- WEIR, PAUL, Washington, D. C.: The first Marconigram mid-ocean newspaper, published under the personal supervision of Signor Marconi, on board the S. S. Etruria, New York to Liverpool, February 7, 1903 (51407).

- WEISS, HOWARD F., Washington, D. C.: Specimen of wood bored by *Martesia cuneiformis*, from Galveston, Tex. (50298).
- WELLS, MRS. WINIFRED CHARTER, Washington, D. C.: An interesting collection of relics of the Charter family, dating from the eighteenth century and the early part of the nineteenth century (50619: loan).
- WERNER, DR. F., Vienna, Austria: Frogs from Africa (51282: exchange).
- WERTHMANN, MR., Osnabrück, Hanover, Prussia: Specimen of marcasite from the Carboniferous mountains of the Teutoburger Wald, near Osnabrück (51509).
- WERTZ, MISS FANNIE, Aria, Va.: Specimen of batrachian, "Hellbender," *Cryptobranchius alleghaniensis* (51733).
- WEST, HENRY P., Washington, D. C.: Larval bullfrog (51732).
- WESTERN AUSTRALIAN MUSEUM AND ART GALLERY, Perth, Western Australia: 23 Australian mammals and a human skeleton (51038: exchange).
- WEYMOUTH, F. W. (See under Gulf Biologic Station, Cameron, La.)
- WHITE, DR. CHARLES A., Washington, D. C.: Dried specimen of crab, *Dorippe japonica*, from Japan (51063).
- WHITE, DAVID. (See under J. A. Kavanagh.)
- WHITE, JOHN J., jr., Washington, D. C.: 28 large mammals, 2 lion skulls, and a bird from British East Africa (51069).
- WHITMAN, PROF. C. O., Chicago Ill.: Specimen of rock pigeon (51076).
- WHITMAN, DARWIN H., Crary Mills, N. Y.: Specimen of luna moth, *Actias luna* (51623).
- WICKES, W. H., Bristol, England: Specimens of "beekite" from the Bathonian, Dundry Hill, Bristol (51645).
- WIGHT, ALEX. E., Wellesley Hills, Mass.: 2 specimens of *Hemisinus lineolatus* from the Wallingford River, Jamaica (51317).
- WILCOX, DR. G. B., Washington, D. C.: Seeds of *Anacardium*, from Mexico (50483).
- WILCOX, BRIG. GEN. T. E., U. S. Army (retired), Washington, D. C.: Specimen of a fungus collected in the vicinity of Washington (50688).
- WILDER, CHARLES H., Cambridge, Mass.: Watch movement made by E. Howard & Company, Boston, Mass. (51428).
- WILKES, MISS JANE, Washington, D. C.: Personal relics of the late Rear Admiral Charles Wilkes, U. S. Navy (50736: loan).
- WILLIAMS, GEN. GEORGE B., Washington, D. C.: 62 specimens of Japanese art, consisting of bronzes, ivory and wood carvings, lacquer, and ceramics (50489: loan).
- WILLIAMSON, E. B., Bluffton, Ind.: 5 dragonflies (50494).
- WILMER, LIEUT. COL. L. WORTHINGTON, Lothian House, Ryde, England: Specimens of recent and fossil shells representing 10 species from Europe (50374); large specimen of *Helix virgata* from near Ryde; and echinoderms and foraminifera from the chalk (50836).
- WILSON, DR. CHARLES B., State Normal School, Westfield, Mass.: Parasitic copepods representing the species *Lepeophtheirus nordmanni* from California, and *Argulus americanus* from Indiana (50912); 6 lots of parasitic copepods, Ergasilidæ (51476). (See under Dr. J. F. McClendon; British Columbia, Biological Station, Departure Bay; and Marine Biological Station, San Diego, Cal.)
- WILTSHIRE, FRANK, Kentville, Nova Scotia: Specimen of "Winninish," *Salmo salar ouananiche*, from Grand Lake, Halifax County, Nova Scotia (51657).
- WINDLE, FRANCIS, West Chester, Pa.: Rose-galls from France (51436).
- WINKLEY, REV. HENRY W., Danvers, Mass.: Specimens of pyramidellid shells from New England and of ostracods from off Bakers Island, Mass. (50636); fresh-water and marine shells from New England (50679); ostracods from Danvers (51478).

- WINLOCK, HERBERT EUSTIS, New York City: Specimens illustrating modern peasant life in Egypt, collected by the donor (50392); collection of bats from Egypt (50675); 2 specimens of quail, *Coturnix coturnix* (50822).
- WINSOR, Dr., Philippine Medical School, Manila, P. I.: Anatomical specimens (51412).
- WOLFE, Mrs. G. M., Forest Glen, Md.: 3 living specimens of *Sedum* and *Rhipsalis* (50767).
- WOOD, Mrs. BALDWIN. (See under Mrs. Harold Dillingham.)
- WOOD, F. F., Port Orford, Oreg.: Tertiary fossil shells, fossil plants, and supposed fossil wood from the Elk River region (50369).
- WOOD, Miss KATHERINE C., Santa Barbara, Cal.: 2 specimens of *Acanthina engonata* (50590).
- WOOD, NELSON R., U. S. National Museum: Specimens of subfossil freshwater shells collected near Clyde, Wayne County, N. Y. (50715); skin of *Quiscalus quiscula* (51449).
- WOOLDRIDGE, EDGAR, Lakeport, Cal.: Specimens of red and brown pumice (vesicular basalt) from Mount Konocti, Lake County, Cal. (51523).
- WOOLLEY, CLAUDE L., Baltimore, Md.: 2 aluminum sundials and an aluminum noon mark (50940); a vertical sundial (51354); sundial of the reclining-cross type (51716).
- WOOTON, Prof. E. O., Agricultural College, N. Mex.: 7 specimens of living cacti from New Mexico (50430); specimen of *Opuntia ballii* from Texas (51338).
- WORTH, HENRY B., Bureau of Fisheries, Tupelo, Miss.: Skin of black skimmer, *Rynchops nigra*, from Tupelo (50593).
- WORTH, S. G., Bureau of Fisheries, Washington, D. C.: Indian arrow points, spearheads, and hatchets from the valley of North Indian Creek, Dry Creek, and Martins Creek, Unicoi County, Tenn. (50713).
- WORTHINGTON, W. W., Shelter Island Heights, N. Y.: Snake from Eau Gallie, Fla. (51725).
- WRIGHT, Dr. F. E., Carnegie Institution, Washington, D. C.: 5 specimens of obsidian from Hrafninnuhryggur, near Myvatn, Iceland (51379).
- WUTHRICH, H., Pierce, Fla.: Specimen of beetle, *Dynastes tityus* (51665).
- YALE UNIVERSITY MUSEUM, New Haven, Conn.: About 750 specimens of Paleozoic invertebrate fossils (51526).
- YELLOWSTONE NATIONAL PARK, Yellowstone Park, Wyo. (through Maj. H. C. Benson, U. S. Army, superintendent): Skin and skeleton of a buffalo (50555).
- YHNELL, G., Webster Springs, W. Va.: A watch movement (51253).
- YOTHERS, M. A., East Lansing, Mich.: 11 specimens of *Lixus marginatus* (51142).
- YOUNG, R. T., The State University of North Dakota, University, N. Dak.: Batrachians from North Dakota (50753).
- ZAHM, Dr. A. F., Washington, D. C.: Models used by Dr. Zahm in his aerodynamical experiments (50876: loan).
- ZELIZKO, I. V., Kaiserliche-Königliche Geologische Reichsanstalt, Vienna, Austria: 40 specimens of Paleozoic fossils from Bohemia (51325: exchange).
- ZELLER, CONRAD, Washington, D. C.: Specimen of mourning dove, *Zenaidura macroura* (51371).
- ZOOLOGICAL MUSEUM. (See under Copenhagen, Denmark.)
- ZOOLOGISCHE SAMMLUNG DES BAYERISCHEN STAATES. (See under Munich, Germany.)

LIST OF PUBLICATIONS OF THE U. S. NATIONAL MUSEUM
ISSUED DURING THE FISCAL YEAR 1909-10, AND OF
PAPERS PUBLISHED ELSEWHERE WHICH RELATE TO
THE COLLECTIONS.

PUBLICATIONS OF THE MUSEUM.

ANNUAL REPORT.

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| Smithsonian Institution United States
National Museum — Report on the
progress and con- dition of the U. S.
National Museum for the year end- | ing June 30, 1909 (Seal) Washing-
ton Government Printing Office
1909
8vo., pp. 1-141. |
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PROCEEDINGS.

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| Smithsonian Institution United States
National Museum — Proceedings
 of the United States National Mu-
seum — Volume XXXVI — | (Seal) Washington Government
Printing Office 1909
8vo., pp. i-xviii, 1-697, pls. 1-70,
figs. 1-204. |
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BULLETINS.

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| Smithsonian Institution United States
National Museum Bulletin 65 —
Dendroid graptolites of the Niagaran
dolomites at Hamilton, Ontario
Compiled by Ray S. Bassler Cura-
tor, Division of Invertebrate Paleontol-
ogy U. S. National Museum (Seal)
 Washington Government Printing
Office 1909
8vo., pp. i-ix, 1-76, pls. 1-5,
figs. 1-91. | Smithsonian Institution United States
National Museum Bulletin 67 —
Directions for collecting and preserv-
ing insects By Nathan Banks
In collaboration with various members
of the Bureau of Entomology, De-
partment of Agriculture (Seal)
Washington Government Printing
Office 1909
8vo., pp. i-xiii, 1-135, pl. 1, figs.
1-188. |
| Smithsonian Institution United States
National Museum Bulletin 66 —
A monographic revision of the twisted
winged insects comprising the order
Strepsiptera Kirby By W. Dwight
Pierce Of the Bureau of Entomology,
U. S. Department of Agriculture (Seal)
 Washington Government Printing
Office 1909
8vo., pp. i-xii, 1-232, pls. 1-15,
figs. 1-3, 1 map. | Smithsonian Institution United States
National Museum Bulletin 68 —
A monograph of West American Pyra-
midellid Mollusks By William
Healey Dall and Paul Bartsch Of
the Division of Mollusks, U. S. National
Museum (Seal) Washington
Government Printing Office 1909
8vo., pp. i-xii, 1-258, pls. 1-30. |

Smithsonian Institution | United States
National Museum | Bulletin 69 | — |
The Tænioid Cestodes of North |
American Birds | By | Brayton
Howard Ransom | Assistant Custodian,
Helminthological Collections, U. S.
National Museum | (Seal) | Washing-
ton | Government Printing Office |
1909

8vo., pp. 1-141, figs. 1-42.

Smithsonian Institution | United States
National Museum | Bulletin 70 | — |
The National Gallery of Art | Depart-
ment of Fine Arts | of the National
Museum | By | Richard Rathbun |
Assistant Secretary of the Smithsonian
Institution, in Charge of the | United
States National Museum | (Seal) |
Washington | Government Printing
Office | 1909

8vo., pp. 1-140, 26 pls.

Smithsonian Institution | United States
National Museum | Bulletin 71 | — |
A monograph of the Foraminifera | of

the North Pacific Ocean | — | Part I.
Astrorhizidæ and Lituolidæ | — | By |
Joseph Augustine Cushman | Of the
Boston Society of Natural History |
(Seal) | Washington | Government
Printing Office | 1910

8vo., pp. i-xiv, 1-134, figs. 1-203.

Smithsonian Institution | United States
National Museum | Bulletin 72 | — |
Catalogue of Nearctic Spiders | By |
Nathan Banks | Custodian, Section of
Arachnida, U. S. National Museum |
(Seal) | Washington | Government
Printing Office | 1910

8vo., pp. i-iii, 1-80.

Smithsonian Institution | United States
National Museum | — | Contributions
| from the | United States National
Herbarium | Volume XII | — | Sys-
tematic Investigations | and | Bibliog-
raphy | (Seal) | Washington | Gov-
ernment Printing Office | 1908-1909

8vo., pp. i-xvi, 1-474, pls. 1-85,
figs. 1-67.

PAPERS PUBLISHED IN SEPARATE FORM.

FROM VOLUME 37 OF THE PROCEEDINGS.

No. 1695. The mouse deer of the Rho-
Linga Archipelago: a study
of specific differentiation
under uniform environ-
ment. By Gerrit S. Miller,
jr. pp. 1-9, pls. 1-3.

No. 1696. Carboniferous air-breathing
vertebrates of the U. S.
National Museum. By Roy
L. Moodie. pp. 11-28, pls.
4-10.

No. 1697. Five new species of recent un-
stalked crinoids. By Austin
Hobart Clark. pp. 29-34.

No. 1698. A new rhynchocephalian rep-
tile from the Jurassic of
Wyoming, with notes on the
fauna of "Quarry 9." By
Charles W. Gilmore. pp.
35-42, pl. 11, figs. 1-3.

No. 1699. On the nature of Edestus and
related genera, with descrip-
tions of one new genus and
three new species. By Oli-
ver P. Hay. pp. 43-61, pls.
12-15, figs. 1-7.

No. 1700. Report on Barnacles of Peru,
collected by Dr. R. E.
Coker and others. By
Henry A. Pilsbry. pp.
63-74, pls. 16-19, figs. 1, 2.

No. 1701. Isopods collected in the North-
west Pacific by the U. S.
Bureau of Fisheries steamer
Albatross in 1906. By Har-
riet Richardson. pp. 75-
129, figs. 1-50.

No. 1702. Fresh-water sponges collected
in the Philippines by the
Albatross expedition. (Sci-
entific results of the Phil-
ippine cruise of the Fisher-
ies steamer Albatross, 1907-
10.—No. 3.) By Nelson
Annandale. pp. 131, 132.

No. 1703. The polychæteous annelids
dredged in 1908 by Mr.
Owen Bryant off the coasts
of Labrador, Newfoundland,
and Nova Scotia. By J.
Percy Moore. pp. 133-146.

- No. 1704. Report on a collection of shells from Peru, with a summary of the littoral marine mollusca of the Peruvian zoological province. By William Healey Dall. pp. 147-294, pls. 20-28.
- No. 1705. Four new land shells from the Philippine Islands. By Paul Bartsch. pp. 295-300, pl. 29.
- No. 1706. Coelenterates from Labrador and Newfoundland, collected by Mr. Owen Bryant from July to October, 1908: By Henry B. Bigelow. pp. 301-320, pls. 30-32.
- No. 1707. Three new land shells from Mexico and Guatemala. By Paul Bartsch. pp. 321-323, pl. 33.
- No. 1708. Studies of North American weevils. By W. Dwight Pierce. pp. 325-364.
- No. 1709. Notes on the Philippine pond snails of the genus *Vivipara*, with descriptions of new species. (Scientific results of the Philippine cruise of the Fisheries steamer *Albatross*, 1907-10.—No. 4.) By Paul Bartsch. pp. 365-367, pl. 34.
- No. 1710. The North American dragonflies (Odonata) of the genus *Macromia*. By Edward Bruce Williamson. pp. 369-398, pls. 35, 36, figs. 1-7.
- No. 1711. A new species of *Cerithiopsis* from Alaska. By Paul Bartsch. pp. 399, 400, 1 fig.
- No. 1712. Fresh-water sponges in the collection of the U. S. National Museum.—Part II. Specimens from North and South America. By Nelson Annandale. pp. 401-406, figs. 1-3.
- No. 1713. Diagnoses of new Cephalopods from the Hawaiian Islands. By S. Stillman Berry. pp. 407-419, figs. 1-9.
- No. 1714. A review of the Serranidae or sea bass of Japan. By David Starr Jordan and Robert Earl Richardson. pp. 421-474, figs. 1-16.
- No. 1715. On olivine-diabase from Davidson County, N. C. By Joseph E. Pogue. pp. 475-484, pl. 37.
- No. 1716. The snapping shrimps (*Alpheidae*) of the Dry Tortugas, Fla. By Henri Coutière. pp. 485-487, figs. 1-3.
- No. 1717. Some bees of the genus *Augochlora* from the West Indies. By T. D. A. Cockerell. pp. 489-494.
- No. 1718. Description of a new terrestrial isopod from Guatemala. By Harriet Richardson. pp. 495-497, 1 fig.

FROM VOLUME 38 OF THE PROCEEDINGS.

- No. 1725. The *Gustavus Vasa* Fox collection of Russian souvenirs in the U. S. National Museum. By Immanuel M. Casanowicz. pp. 1-15, pls. 1-8.
- No. 1726. On sand-barites from Kharga, Egypt. By Joseph E. Pogue. pp. 17-24, pl. 9.
- No. 1727. The birds collected and observed during the cruise of the United States Fisheries steamer "*Albatross*" in the North Pacific Ocean, and in the Bering, Okhotsk, Japan, and Eastern Seas, from April to December, 1906. By Austin Hobart Clark. pp. 25-74.

- No. 1728. Description of a new species of deep-water sculpin (*Trigloporus ontariensis*) from Lake Ontario, with notes on related species. By David Starr Jordan and William Francis Thompson. pp. 75-78, figs. 1-3.
- No. 1729. Report on isopods from Peru, collected by Dr. R. E. Coker. By Harriet Richardson. pp. 79-85, figs. 1-6.
- No. 1730. Three new genera and species of parasitic Hymenoptera. By J. C. Crawford. pp. 87-90, figs. 1-5.
- No. 1731. The batrachians and reptiles of Formosa. By Leonhard Stejneger. pp. 91-114.
- No. 1732. The phylogenetic interrelationships of the recent crinoids. By Austin H. Clark. pp. 115-118.
- No. 1733. New Hymenoptera from the Philippine Islands. By J. C. Crawford. pp. 119-133.
- No. 1734. Notes on a collection of fishes from Cameron, La. By Frank Walter Weymouth. pp. 135-145, figs. 1, 2.
- No. 1735. Report on a collection of birds made by Pierre Louis Jouy in Korea. By Austin H. Clark. pp. 147-176.
- No. 1736. On some land shells collected by Dr. Hiram Bingham in Peru. By William Healey Dall. pp. 177-182, figs. 1-4.
- No. 1737. Fresh-water sponges in the collection of the U. S. National Museum.—Part III. Description of a new species of *Spongilla* from China. By Nelson Annandale. p. 183.
- No. 1738. A revision of the fossil plants of the genus *Nageiopsis* of Fontaine. By Edward W. Berry. pp. 185-195, figs. 1, 2.
- No. 1739. On a collection of Tenthredinoidea from Eastern Canada. By S. A. Rohwer. pp. 197-209.
- No. 1740. On the origin of certain types of crinoid stems. By Austin Hobart Clark. pp. 211-216.
- No. 1741. Summary of the shells of the genus *Conus* from the Pacific Coast of America in the U. S. National Museum. By William Healey Dall. pp. 217-228.
- No. 1742. Descriptions of some new species and genera of Lepidoptera from Mexico. By Harrison G. Dyar. pp. 229-273.
- No. 1743. A new Australian crinoid. By Austin Hobart Clark. pp. 275-276.
- No. 1744. A review of the flounders belonging to the genus *Pleuronichthys*. By Edwin Chapin Starks and William Francis Thompson. pp. 277-287, figs. 1, 2.
- No. 1745. The North American bees of the genus *Nomia*. By T. D. A. Cockerell. pp. 289-298.
- No. 1746. A new fresh-water amphipod from Virginia, with some notes on its biology. By George C. Embury. pp. 299-305, figs. 1-17.
- No. 1747. Descriptions of eight new species of fossil turtles from west of the one hundredth meridian. By Oliver P. Hay. pp. 307-326, pls. 10-12, figs. 1-23.
- No. 1748. A comparison of the chub-mackerels of the Atlantic and Pacific Oceans. By Barton Warren Evermann and William Converse Kendall. pp. 327, 328.
- No. 1749. A new European crinoid. By Austin Hobart Clark. pp. 329-333.

FROM VOLUME 12 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 10. Miscellaneous papers: The genus *Cereus* and its allies in North America. By N. L. Britton and J. N. Rose. pp. 413-437, pls. 61-76. Five new species of Crassulaceæ from Mexico. By J. N. Rose. pp. 439, 440, pls. 77-81. Supplement to the monograph of the North American Umbelliferae. By John M. Coulter and J. N. Rose. pp. 441-451, pls. 82, 83. Apogamy in the maize plant. By G. N. Collins. pp. 453-455, pls. 84-85.

FROM VOLUME 13 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 2. Three new species of *Echeveria* from southern Mexico. By J. N. Rose and J. A. Purpus. pp. i-v, 45, 46, pls. 10-14.

Part 3. The grasses of Alaska. By F. Lamson-Scribner and Elmer D. Merrill. pp. i-ix, 47-92, pls. 15, 16.

Part 4. New or noteworthy plants from Colombia and Central America.—2. By Henry Pittier. pp. i-vii, 93-132, pls. 17-20, figs. 2-41.

Part 5. Relationships of the ivory palms. By O. F. Cook. pp. i-v, 133-141, figs. 42-44.

FROM VOLUME 14 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 1. The lichens of Minnesota. By Bruce Fink. pp. i-xvii, 1-269, pls. 1-51, figs. 1-18.

CLASSIFIED LIST OF PAPERS BASED WHOLLY OR IN PART ON THE NATIONAL COLLECTIONS.

MUSEUM ADMINISTRATION.

RATHBUN, RICHARD. Smithsonian Institution | United States National Museum | Bulletin 70 | The National Gallery of Art | Department of Fine Arts | of the National Museum | By | Richard Rathbun | Assistant Secretary of the Smithsonian Institution, in charge of the | United States National Museum | (Seal) | Washington | Government Printing Office | 1909

8vo., July 1, 1909, pp. 1-140, 26 plates.

RATHBUN, RICHARD. Smithsonian Institution | United States National Museum | Report on the progress and condition of the U. S. National | Museum for the year | ending June 30, 1909 | (Seal) | Washington | Government Printing Office | 1909

8vo., 1909, pp. 1-141.

ETHNOLOGY, ARCHEOLOGY, PHYSICAL ANTHROPOLOGY.

BUSHNELL, DAVID I., jr. The various uses of buffalo hair by the North American Indians.

Amer. Anthropologist (n. s.) II, No. 3, July-Sept., 1909, pp. 401-425.

This paper gives references from early writings and describes specimens from the U. S. National Museum and other museums at home and abroad. The fact is clearly brought out that the use of the hair of the *Bison americanus* was general among the native tribes of North America.

FEWKES, J. WALTER. An Antillean statuette, with notes on West Indian religious beliefs.

Amer. Anthropologist (n. s.) II, No. 3, July-Sept., 1909, pp. 348-358.

This paper describes an Antillean idol (cast) in the National Museum and seeks to identify the figure with those collected at various times but not localized. The conclusion reached is that the image is a product of the highest culture of prehistoric Porto Rico and Santo Domingo.

FEWKES, J. WALTER—Continued.

A discussion of the fundamental religious ideas of the Antilleans follows the description of the idol.

Cremation in cliff-dwellings.

Records of the Past, ix, pt. 3, May-June, 1910, pp. 154-6.

Relates to the discovery of calcined human remains in Cliff-Palace, Mesa Verde, Colo., and discusses the range of aboriginal cremation in the southwestern United States.

Report on the excavation and repair of Cliff-palace, Mesa Verde National Park, Colo., in 1909.

Reports of the Superintendent of the Mesa Verde National Park and J. Walter Fewkes, in charge of excavation and repair of ruins, to the Secretary of the Interior. Department of the Interior, 1909, pp. 13-33, pls. 1-5.

The report of Dr. Fewkes is preceded by the report of the superintendent of the park dealing with the affairs of his custodianship, attention being given to roads and trails, water supply, travel, privileges, extension of boundaries, rules and regulations, etc. Dr. Fewkes first describes the ruins as they appeared before operations began, and refers to means of access, vandalism, methods of repair work, etc. The body of the paper is an account of the work of excavation and repair and is supplemented by descriptive details of the cliff village, perhaps the most remarkable yet discovered. The paper is accompanied by a plan of the ruins, and is embellished with four half-tone plates illustrating the buildings before and after the repairs were made.

HRDLIČKA, ALEŠ. Note sur la variation morphologique des Egyptiens depuis

HRDLIČKA, ALEŠ—Continued.

les temps préhistoriques ou prédynastiques.

Bull. et Mem. Soc. d'Anthropologie, Paris, Fifth Series, x, No. 3, 1909, pp. 143-144.

An abstract of the principal results of observations made by the author on the ancient and modern Egyptians while accompanying the Metropolitan Museum's recent expedition to Egypt. It speaks for the continuity of race, but against the continuity of type of the inhabitants of the Nile valley from the pre-dynastic to the present time.

On the stature of the Indians of the southwest and of northern Mexico.

Putnam Anniversary Volume, 1909, pp. 405-426.

This paper presents in brief form a comparative study of stature among twenty-three Indian tribes of the southwest United States and northern Mexico, and discusses the causes underlying the remarkable diversity.

Report on an additional collection of skeletal remains from Arkansas and Louisiana (Made, and presented to the National Museum in 1909, by Mr. Clarence B. Moore.)

Journ. Acad. Nat. Sci. Phila., 14, 1909, pp. 172-249, 1 map, figs. 1-9.

This paper is a detailed study of the extensive collection of skeletal remains obtained from mounds and other Indian burial places in Arkansas and Louisiana. The crania are found to present two varieties of deformation, and represent two types of people. Detailed observations are given regarding the interesting pathological conditions characterizing the skulls and other bones.

HISTORY.

CASANOWICZ, IMMANUEL M. The Gustavus Vasa Fox collection of Russian souvenirs in the United States National Museum.

Proc. U. S. Nat. Mus., 38, No. 1725, Apr. 30, 1910, pp. 1-15, pls. 1-8.

This paper contains a resumé of the special mission sent by Congress in 1866

CASANOWICZ, IMMANUEL M.—Continued.

to the Emperor of Russia, bearing congratulations upon his escape from assassination, and a description of the gifts presented by Emperor Alexander II, and by municipalities and private persons of Russia, to members of the American mission.

MAMMALS.

ALLEN, J. A. Additional mammals from Nicaragua.

Bull. Amer. Mus. Nat. Hist., 28, Art. 9, Apr. 30, 1910, pp. 87-115.

Comparisons are made with material from the Biological Survey.

BAILEY, VERNON. Two new pocket gophers of the genus *Thomomys*.

Proc. Biol. Soc. Washington, 23, May 4, 1910, pp. 79-80.

Describes two new gophers; the types being in the Biological Survey collection.

ELLIOTT, D. G. On the genus *Presbytis* Esch., and "Le Tarsier" Buffon, with descriptions of two new species of *Tarsius*.

Bull. Amer. Mus. Nat. Hist., 28, Art. 13, May 27, 1910, pp. 151-154.

Describes *Tarsius saltator* and *Tarsius borneanus*. Both types are in the U. S. National Museum collection.

— Description of a new subspecies of African monkey of the genus *Cercoptes*.

Smithsonian Misc. Colls., 56, No. 1937, June 11, 1910, p. 1.

Based on material collected by the Smithsonian African Expedition.

HELLER, EDMUND. A new rodent of the genus *Georchus*.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 4, No. 1879, Sept. 14, 1909, pp. 469, 470, pl. 54.

Georchus kapiti, from the Smithsonian African Expedition collections, is described as new.

— Two new rodents from British East Africa.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 4, No. 1880, Nov. 13, 1909, pp. 471, 472, pl. LVI.

Thamnomys loringi and *Mus peromyscus*, from the Smithsonian African Expedition collections, are described.

— Five new rodents from British East Africa.

Smithsonian Misc. Colls., 54, No. 1924, Feb. 28, 1910, pp. 1-4, pls. 1, 2.

Describes new mammals from the Smithsonian African Expedition collections.

— A new sable antelope from British East Africa.

Smithsonian Misc. Colls., 54, No. 1926, Mar. 3, 1910, pp. 1, 2.

Describes *Ozanna roosevelti*, collected by the Smithsonian African Expedition.

HOLLISTER, N. Descriptions of two new muskrats.

Proc. Biol. Soc. Washington, 23, Feb. 2, 1910, pp. 1, 2.

Describes *Fiber zibethicus mergens* and *F. z. zalophus*. The types are in the Biological Survey collection.

HOLLISTER, N. Mammals collected by John Jay White in British East Africa.

Smithsonian Misc. Colls., 56, No. 1930, Mar. 31, 1910, pp. 1-12, pls. 1, 2.

An annotated list of the species collected by Mr. White with remarks on the specimens presented to the U. S. National Museum. Three new species are described—two antelopes and one monkey.

— A check list of Wisconsin mammals.

Bull. Wisconsin Nat. Hist. Soc., 8, No. 1, May 7, 1910, pp. 21-31.

List of mammals known from the State, based largely upon the Biological Survey collection.

HOWELL, A. H. Notes on mammals of the middle Mississippi Valley, with description of a new woodrat.

Proc. Biol. Soc. Washington, 22, Mar. 23, 1910, pp. 23-33.

Based on Biological Survey collections. Describes *Neotoma floridana illinoensis*.

MILLER, GERRIT S., jr. The mouse deer of the Rhio-Linga Archipelago: A study of specific differentiation under uniform environment.

Proc. U. S. Nat. Mus., 37, No. 1695, Sept. 1, 1909, pp. 1-9, pls. 1-3.

Notes on various insular species of *Tragulus*, with colored plates and distribution maps.

— A new carnivore from British East Africa.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 4, No. 1883, Dec. 18, 1909, pp. 485-487, pls. 60-62.

Description of a new fox, *Otocyon virgatus*, collected by the Smithsonian African Expedition.

— Two new genera of murine rodents.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 4, No. 1885, Jan. 12, 1910, pp. 497, 498, figs. 86, 87.

Describes *Myopus* and *Phodopus*, new Microtine and Cricetine genera.

— A new rodent of the genus *Saccostomus* from British East Africa.

Smithsonian Misc. Colls., 54, No. 1925, Feb. 28, 1910, pp. 1, 2, 1 pl.

Describes *Saccostomus umbriventer* from material collected by the Smithsonian African Expedition.

MILLER, GERRIT S., jr. Brief synopsis of the waterrats of Europe.

Proc. Biol. Soc. Washington, 23, Mar. 23, 1910, pp. 19-22.

Synopsis of European species of *Arvicola*, with description of a new form. Based on material in the British Museum and the U. S. National Museum.

— Description of a new species of hippopotamus.

Smithsonian Misc. Colls., 54, No. 1927, Mar. 28, 1910, pp. 1-3, pls. 1-4.

Describes *Hippopotamus constrictus* from Angola. The type is in the U. S. National Museum.

— The generic name of the house-rats.

Proc. Biol. Soc. Washington, 23, Apr. 19, 1910, pp. 57-60.

Shows the generic distinctness of the house mouse from the rats, and raises the subgeneric name *Epimys* to generic value for the latter.

NELSON, E. W. The rabbits of North America.

North Amer. Fauna, No. 29, Aug. 31, 1909, pp. 1-314, pls. 1-13, figs. 1-19.

NELSON, E. W.—Continued.

A complete revision of the group, based upon the collections in the U. S. National Museum; one new subspecies, *Sylvilagus aquaticus littoralis*, from Louisiana, is described.

OSGOOD, W. H. Biological investigations in Alaska and Yukon Territory.

North Amer. Fauna, No. 30, Oct. 7, 1909, pp. 1-96, pls. I-V, figs. 1, 2.

Annotated list of mammals from the region, with description of a new subspecies in the Biological Survey collection.

TRUE, FREDERICK W. Description of a skull and some vertebræ of the fossil cetacean *Diocotichus vanbenedeni* from Santa Cruz, Patagonia.

Bull. Amer. Mus. Nat. Hist., 28, Art. 4, Mar. 22, 1910, pp. 19-32, pls. 1-5.

Describes and figures a nearly perfect skull of the fossil porpoise originally named *Notocetus vanbenedeni* by Moreno, and shows that it is a small species belonging to the family Squalodontidæ, but that it has single-rooted teeth. The characters of the vertebræ are also given. The specimen belongs to the American Museum of Natural History.

BIRDS.

AMER. ORNITHOLOGISTS' UNION COMMITTEE ON NOMENCLATURE. Fifteenth supplement to the American Ornithologists' Union check list of North American birds.

Auk, 26, No. 3, July, 1909, pp. 294-303.

A list of the changes adopted since the publication of the fourteenth supplement of the check list, covering about sixty rulings of the committee.

BANGS, OUTRAM. New or rare birds from western Colombia.

Proc. Biol. Soc. Washington, 23, May 4, 1910, pp. 71-76.

Notes on fourteen forms, of which the following are described as new: *Odontophorus balliolus* (p. 71), *Picumnus canus* (p. 72), *Xiphorhynchus rosenbergi* (p. 72), *Rhopocites alogus* (p. 72), *Rhynchocyclus sulphureus asemus* (p. 73), *Mionectes olivaceus hederaceus* (p. 73), *Pheugopedius spadix* (p. 74), *P. mystacalis saltuensis* (p. 74), *Henicorhina leucosticta eucharis* (p. 74).

CLARK, AUSTIN HOBART. The birds collected and observed during the cruise of the United States Fisheries steamer "Albatross" in the North Pacific Ocean,

CLARK, AUSTIN HOBART—Continued.

and in the Bering, Okhotsk, Japan, and Eastern Seas, from April to December, 1906.

Proc. U. S. Nat. Mus., 38, No. 1727, April 30, 1910, pp. 25-74.

An account of the birds noted or obtained by the author during the cruise of the Albatross in 1906. Extended notes are given under many species, of which 179 are enumerated.

— Report on a collection of birds made by Pierre Louis Jouy in Korea.

Proc. U. S. Nat. Mus., 38, No. 1735, May 9, 1910, pp. 147-176.

Notes on 163 species, comprising the collection formed by the late P. L. Jouy.

CORY, CHARLES B. The birds of the Leeward Islands, Caribbean Sea.

Field Mus. Nat. Hist., Pub. 137, Ornith. Ser., I, No. 5, Oct. 25, 1909, pp. 193-255, pl. 6.

An account of the birds of the Leeward Islands, Caribbean Sea, with a tabular list of the species hitherto recorded from the region. *Icterus icterus harterti* (p. 201), *Cæreba lowii* (p. 217), *Dendroica ruficapilla obscura* (p. 217), *Conurus æruginosus tortugensis* (p. 220), *Tiaris tortugensis* (p. 221),

CORY, CHARLES B.—Continued.

Cereba ferryi (p. 221), *Holquistus orquilensis* (p. 227), *Conurus neozensus* (p. 243), and *Platycichla venezuelensis atra* (p. 251) are described as new.

GRINNELL, JOSEPH. Birds of the 1908 Alexander Alaska Expedition, with a note on the avifaunal relationships of the Prince William Sound District.

Univ. Cal. Pub. Zool., 5, No. 12, Mar. 5, 1910, pp. 361-428, pls. 32-34; figs. 1-9.

An account of the birds collected on the 1908 Alexander Expedition to the Prince William Sound region, Alaska, with a chapter on the composition of the avifauna of that district. The following subspecies are described as new: *Canachites canadensis atratus* (p. 380), *Lagopus rupestris kelloggæ* (p. 383), *Ceryle alcyon caurina* (p. 388), *Dryobates pubescens glacialis* (p. 390), *Passerella iliaca sinuosa* (p. 405), and *Penthestes rufescens vivar* (p. 414).

HARTERT, ERNST. Die Vögel | der paläarktischen Fauna. | Systematische Übersicht | der | in Europa, Nord-Asien und der Mittelmeerregion | vorkommenden Vögel. | Von | Dr. Ernst Hartert. | — | Heft VI (Doppelheft). | — | Seite 641-832. | Mit 10 Abbildungen. | — | Berlin. | Verlag von R. Friedländer und Sohn. | Agents in London: Witherby & Co., 326 High Holborn. | Ausgegeben im Juni 1910.

8vo., pp. xiii-xlix, 641-832; figs. 125-134.

A descriptive account of 253 species and subspecies of Palearctic birds, comprising part of the families Muscipidæ and Turdidæ, and the Accentoridæ, Troglodytidæ and Hirundinidæ. The following are indicated as new forms: *Oreicola ferrea haringtoni* (p. 711), *Erithacus rubecula witherbyi* (p. 753), *Enicurus leschenaulti indicus* (p. 760), *Microcichla scouleri fortis* (p. 761, note), *Prunella collaris ripponi* (p. 766), *Prunella fulvescens dresseri* (p. 770), *Troglodytes troglodytes taiwanus* (p. 776), *T. t. zelandicus* (p. 777), *T. t. kabytorum* (p. 780), *T. t. szetschuanus* (p. 783), *T. t. ogawæ* (p. 784), *Cinclus cinclus hibernicus* (p. 790), *Chelidon rustica transilivica* (p. 802), *Hirundo urbica meridionalis* (p. 809), and *H. u. nigrimentalis* (p. 810).

HOWELL, ARTHUR H. Breeding records from southern Illinois.

Auk, 27, No. 2, Apr., 1910, p. 216.
Notes on 8 species found breeding in southern Illinois.

MAILLIARD, JOSEPH. The status of the California bi-colored blackbird.

Condor, 12, No. 2, March 25, 1910, pp. 63-70.

The status of *Agelaius gubernator californicus* is discussed, and the author concludes it to be a subspecies of *A. phoeniceus*.

NELSON, E. W. A new subspecies of pigmy owl.

Proc. Biol. Soc. Washington, 23, June 24, 1910, pp. 103, 104.

Glaucidium gnoma pinicola (p. 103) is described as new to science.

OSGOOD, WILFRED H. Biological investigations in Alaska and Yukon Territory.

North Amer. Fauna, No. 30, Oct. 7, 1909, pp. 1-96, pls. 1-5, figs. 1, 2.

Notes on birds observed or collected in east central Alaska, the Ogilvie Range, Yukon Territory, and on the Macmillan River.

PALMER, T. S. The black rail in Maryland.

Auk, 26, No. 4, Oct., 1909, p. 427.

Records the occurrence of three specimens of this species on the Patuxent River.

RICHMOND, CHARLES W. A reprint of the ornithological writings of C. S. Rafinesque. Part II.

Auk, 26, No. 3, July, 1909, pp. 248-262.

A reprint of the scattered ornithological writings of Rafinesque (excepting his "Analyse").

RIDGWAY, ROBERT. Diagnoses of new forms of Micropodidæ and Trochilidæ.

Proc. Biol. Soc. Washington, 23, Apr. 19, 1910, pp. 53-56.

Short diagnoses are given of the following new species and subspecies: *Streptoprocne zonaris mexicana* (p. 53), *Chetura richmondi* (p. 53), *Cypseloides niger jamaicensis* (p. 53), *C. n. costaricensis* (p. 53), *Phaethornis longirostris veracrucis* (p. 54), *P. adolphi saturatus* (p. 54), *Eupherusa eximia nelsoni* (p. 54), *Amizilis bangsi* (p. 54), *Anthracochoax prevosti gracilirostris* (p. 55), and *Florisuga mellivora tobagenensis* (p. 55). *Nesophlox* (p. 55) is a new genus of Trochilidæ.

RILEY, J. H. On the name and synonymy of the Antillean sharp-shinned hawk.

Proc. Biol. Soc. Washington, 23, May 4, 1910, pp. 77, 78.

RILEY, J. H.—Continued.

Accipiter striatus Vieillot, is shown to be the correct name of the species now known as *A. fringilloides* Vigors.

SWALES, B. H. *Bubo virginianus* occidentalis in Michigan.

Auk, 27, No. 2, Apr., 1910, p. 208.
Records a specimen of this subspecies from northern Michigan.

——— Carolina parakeet (*Conurus carolinensis*).

Auk, 27, No. 2, Apr., 1910, p. 209.
The supposed Michigan record of this species, based on a specimen in the National Museum, is found to be erroneous.

SWARTH, HARRY S. Two new owls from Arizona, with description of the juvenal

SWARTH, HARRY S.—Continued.

plumage of *Strix occidentalis occidentalis* (Xantus).

Univ. Cal. Pub. Zool., 7, No. 1,
May 26, 1910, pp. 1-8.

Otus asio gilmanii (p. 1), and *Strix occidentalis huachucae* (p. 3) are described as new.

THAYER, JOHN E., and OUTRAM BANGS. Descriptions of new birds from Central China.¹

Bull. Mus. Comp. Zool., 52, No. 8,
May, 1909, pp. 139-141.

Descriptions of the following new forms are given: *Collocalia fuscipha capnitis* (p. 139), *Collocalia inopina* (p. 139), *Turdus cardis lateus* (p. 140), *Parus major arlatus* (p. 140), *Nucifraga hemispila macella* (p. 140), *Cyornis tickelliae glaucicomans* (p. 141), *Niltava lychnis* (p. 141), and *Cyanoptila cumatilis* (p. 141).

REPTILES AND BATRACHIANS.

GILL, THEODORE. First use of Amphibia in its modern sense.

Science (n. s.), 31, June 17, 1910,
pp. 958, 959.

The use of Amphibia for a class distinct from Reptilia has not been correctly traced back earlier than 1822. It is here shown that it was so used in 1806 by Latreille in his "Genera Crustaceorum et Insectorum" (I, p. 2).

STEJNEGER, LEONHARD. The batrachians and reptiles of Formosa.

Proc. U. S. Nat. Mus., 38, No.
1731, May 3, 1910, pp. 91-114.

A critical summary of the species of batrachians and reptiles occurring in the island of Formosa. The total number is 86 species, being an increase of 26 since the publication of the author's "Herpetology of Japan" in 1907.

FISHES.

BEAN, BARTON A., and ALFRED C. WEED.

Notes on certain features of the life history of the Alaskan fresh-water sculpin.

Smithsonian Misc. Colls., 52,
Quar. issue, Pt. 4, No. 1876,
Aug. 19, 1909, pp. 457-460.

The paper gives the results of an examination of the stomach contents of fourteen specimens taken at random from many thousands caught in traps at the salmon hatchery at Loring, Alaska. These fish had eaten 39 young salmon and 46 eggs within a few hours of the time they were killed. Parasitic worms were very numerous, a total of 322 being found in the fourteen specimens.

COCKERELL, T. D. A. The scales of the Mormyrid fishes, with remarks on Albulas and Elops.

Smithsonian Misc. Colls., 56, Pt.
3, No. 1931, May 7, 1910, pp. 1-4,
figs. 1-3.

An attempt is made to decide the relationships of the families *Albulidae*, *Mormyridae*, *Elopidae*, and *Hiodontidae* on the basis of the structure of the scales.

EVERMANN, BARTON WARREN, and WILLIAM CONVERSE KENDALL. A comparison of the chub-mackerels of the Atlantic and Pacific Oceans.

Proc. U. S. Nat. Mus., 38, No.
1748, June 18, 1910, pp. 327, 328.

The Atlantic form (*Scomber colias*) is declared to be specifically distinct from the Pacific form (*Scomber japonicus*).

——— and LEWIS RADCLIFFE. Notes on a Cyprinodont (*Orestias agassizii*) from central Peru.

Proc. Biol. Soc. Washington, 22,
July 28, 1909, pp. 165-170.

This paper is based on about one hundred specimens excellently preserved to show the color pattern. It is concluded that certain proposed specific differentiations based on the color pattern are not tenable.

GILL, THEODORE. Angler fishes: their kinds and ways.

Rep. Smithsonian Inst., 1908
(1909), No. 1907, pp. 565-615,
figs. 1-49.

After an introduction on "Generalities," the subject matter is considered

¹ Omitted from the report for 1909.

GILL, THEODORE—Continued.

under three parts. Part I treats of the characteristics of the "order Pediculati," gives a synopsis of the "Pediculate families," notices the "early Pediculates," and comments on "the families of Pediculates," giving numerous illustrations of species of the six families. Part II treats of "the habits of typical Antennariids" (*Antennarius* and *Pterophryne* sp.). In Part III the true egg-raft, like that of a Lophiid, is illustrated and "the so-called 'nest' of the Frogfish" is noticed; the latter proves to be the result of deposition of the filamentiferous eggs of a Flying-fish (Exocoetid). The subfamily names Dolopichthyines (p. 580), Caulophrynines (p. 585), and Cœlophrynines (p. 595) are published for the first time.

——— Systematic Zoology: its progress and purpose.

Advance print from the Proceedings of the Seventh International Zoological Congress, Boston meeting, Aug. 19-24, 1907 (1910), pp. 1-21.

The same address as was published in *Science*, Oct. 18, 1907 (vol. 26, pp. 489-505), and in the Smithsonian Report for 1907 (pp. 449-471), but with a few trivial modifications from the former, and the addition of a footnote (p. 9) in Cuvier's disputed Christian name, which is George Léopold Chrétien Frédéric Dagobert, and without the new notes and 14 portraits of the Smithsonian edition.

——— A plea for observation of the habits of fishes and against undue generalization.—Address before the Fourth International Fishery Congress held at Washington, U. S. A., September 22 to 26, 1908.

Bull. Bur. Fisheries, 28, 1908, No. 708, Apr., 1910, pp. 1059-1069.

Attention is called to the fact that "essentials of some of our most esteemed fishes are scarcely known beyond a very small circle of pisciculturists," and the Crappie (*Pomoxis sparoides*) is cited as "a notable case." It is shown that closely related species differ much in habits, as the Wels from the Glanis (*Parasiturus aris-totelis*) and the Hassars (*Callichthys*) from *Corydoras*. Nearly related fishes that exercise parental care may differ in details of that care, as the Blackbass from the Sunfish. There are also differences in the characteristics of the sexes. For instance, the male of the Lump sucker is much smaller than the female, but in the Bolti of Egypt (*Tilapia nilotica*) the male is the larger. In many care-taking fishes the males assume charge of the eggs, and it has

GILL, THEODORE—Continued.

been assumed that they always do, but it now appears that the females of numerous Cichlids (as the Tilapias) take the eggs in their mouths and so care for them. The common eel is the subject of much misunderstanding. It is often urged that eels must spawn in fresh water and that others that have spawned reenter rivers, but it is now well known to ichthyologists that all spawning is done in the deep sea and that no eels return after spawning. Several cases of parasitism or commensalism among fishes are noticed. Caution is urged against excessive generalization and the necessity of recognizing some individuality maintained. A "schedule for observation" of fishes is added.

——— The structural characteristics and relations of Apodal fishes.

Science (n. s.), 31, May 20, 1910, pp. 789, 790.

Abstract of a communication to the National Academy of Sciences. The ordinal characteristics of the restricted Apodes are given. The order is limited to those with maxillaries clamping the rostral region and without intermaxillaries. The homologies of the dentigerous bones are considered, and the suborders of Enchelycephals and Colocephals are recognized.

JORDAN, DAVID STARR, and ROBERT EARL RICHARDSON. A review of the Serranidæ or sea bass of Japan.

Proc. U. S. Nat. Mus., 37, No. 1714, Jan. 19, 1910, pp. 421-474, figs. 1-16.

——— and WILLIAM FRANCIS THOMPSON. Description of a new species of deep-water sculpin (*Trigloporus ontariensis*) from Lake Ontario, with notes on related species.

Proc. U. S. Nat. Mus., 38, No. 1728, Apr. 30, 1910, pp. 75-78, figs. 1-3.

KENDALL, WILLIAM CONVERSE. (See under Barton Warren Evermann.)

RADCLIFFE, LEWIS. (See under Barton Warren Evermann.)

RICHARDSON, ROBERT EARL. (See under David Starr Jordan.)

STARKS, EDWIN CHAPIN, and WILLIAM FRANCIS THOMPSON. A review of the flounders belonging to the genus *Pleuro-nichthys*.

Proc. U. S. Nat. Mus., 38, No. 1744, June 14, 1910, pp. 277-287, figs. 1, 2.

THOMPSON, WILLIAM FRANCIS. (See under David Starr Jordan and Edwin Chapin Starks.)

WEED, ALFRED C. (See under Barton A. Bean.)

WEYMOUTH, FRANK WALTER. Notes on a collection of fishes from Cameron, Louisiana.

Proc. U. S. Nat. Mus., 38, No. 1734, May 3, 1910, pp. 135-145, figs. 1, 2.

Contains a description of a new genus and species of the family Cerdalidae.

MOLLUSKS.

BARTSCH, PAUL. *Eulima capillastericola*. *Vidensk. Medd. fra den Naturhist. Forening i København*, 1909, p. 195.

In this paper the above species is described as new. The type is in the Copenhagen Museum.

— Four new land shells from the Philippine Islands.

Proc. U. S. Nat. Mus., 37, No. 1705, Nov. 26, 1909, pp. 295-300, pl. 29.

In this paper *Cochlostyla worcesteri*, *Cochlostyla annulata fugensis*, *Leptopoma freeri*, and *Coptocheilus mcgregori* are described as new. The types are in the U. S. National Museum.

— Three new land shells from Mexico and Guatemala.

Proc. U. S. Nat. Mus., 37, No. 1707, Dec. 14, 1909, pp. 321-323, pl. 33.

In this paper *Omphalina pittieri*, *Euglandina nelsoni*, and *pilsbryi* are described as new. The types are in the U. S. National Museum.

— Notes on the Philippine pond snails of the genus *Vivipara*, with descriptions of new species. (Scientific results of the Philippine cruise of the Fisheries steamer Albatross, 1907-1910.—No. 4.)

Proc. U. S. Nat. Mus., 37, No. 1709, Dec. 14, 1909, pp. 365-367, pl. 34.

In this paper *Vivipara buluanensis solana*, *cebuensis*, *mindanensis mamananua*, *partelloi* and *clemensi* are described as new. The types are in the U. S. National Museum.

— A new species of *Cerithiopsis* from Alaska.

Proc. U. S. Nat. Mus., 37, No. 1711, Dec. 11, 1909, pp. 399, 400, 1 fig.

In this paper *Cerithiopsis stephensi* is described as new. The type is in the U. S. National Museum.

BARTSCH, PAUL. Eine Beschreibung der Verschiedenen Arten der Susswasser Muscheln des Mississippi und seiner Nebenflüsse.

The Technologist, Mar. 1910, p. 68.

An abstract of a lecture on the pearly fresh water mussels of the Mississippi River and its tributaries.

— More notes on the Family Pyramidellidae.

Nautilus, 23, No. 4, 1909, pp. 54-59.

A reply to a criticism upon the paper entitled "Pyramidellidae of New England and the adjacent region." *Proc. Bost. Soc. Nat. Hist.*, 34, 1909, pp. 67-113, pls. 11-14.

— New marine shells from the Northwest Coast of America.

Nautilus, 23, No. 11, 1910, pp. 136-138.

In this paper the following species are described as new: *Leptogyra alaskana*, *Alvania bakeri*, *Onoba asser*, and *Odostomia cookeana*. The types are in the U. S. National Museum.

— (See also under William Healey Dall.)

DALL, WILLIAM HEALEY. Notes on the relations of the molluscan fauna of the Peruvian Zoological Province.

Amer. Naturalist, 43, No. 513, Sept. 1909, pp. 532-541.

A discussion of the zoological relations and history of exploration of the provinces deduced from data presented in *Proc. U. S. Nat. Mus.*, No. 1704 (see post ea).

— Report on a collection of shells from Peru, with a summary of the littoral marine mollusca of the Peruvian Zoological Province.

Proc. U. S. Nat. Mus., 37, No. 1704, Nov. 24, 1909, pp. 147-294, pls. 20-28.

The specimens upon which this report is based are represented by a typical

DALL, WILLIAM HEALEY—Continued.

series received from the authorities of Peru by the U. S. National Museum. The report contains: First, a description with illustrations of the economic marine mollusks of Peru; second, a discussion of the history of discovery of the Peruvian fauna and of its relations to adjacent faunal provinces; third, a bibliography of the principal works bearing on this fauna; fourth, a catalogue with references to figures and statement of distribution of 869 species which have been reported from the Peruvian Province; lastly, a list of 650 synonyms with references to the names adopted in the preceding catalogue. This catalogue is a compilation from the literature and the data afforded by the National Collection, and is not intended to be taken as a monographic revision. The following new species are described and figured: *Modiolus arciformis*, *Aligena cokeri*, *Diplodonta (Felandiella) artemidis*, *Xylotrya dryas*, *Bulimulus cokerianus*, *Megatebennus cokeri*. The following new names are proposed for species of which the current name is untenable: *Acmæa Orbigny* for *A. scutum* Orbigny not Eschscholtz; *Clio antarctica* for *Hyalæa australis* Orbigny not Peron; *Williamia galapagana* for *Nucella subspiralis* Wimmer not Carpenter; *Murex clenensis* for *M. plicatus* Sowerby not Gmelin; *Thais peruensis* for *Purpura peruviana* Eyndoux and Souleyet not of Blainville; *Architectonica Kochii* for *Solarium nanum* Philippi not Grateloup; *Fissuridea asperior* for *F. aspera* Sowerby not Eschscholtz; *Tonicella (Mopaliella) stigmata* for *Chiton bipunctatus* Sowerby not G. Fischer; *Glycymeris chemnitzii* for *Pectunculus minor* Orbigny not Isaac Lea; and *Donax aricana* for *D. radiata* Valenciennes not of Gmelin.

— Description of two new pulmonate mollusks, with a list of other species from the Solomon Islands collected by Dr. George A. Dorsey.

Field Mus. Nat. Hist., Pub. 139, Zool. Ser., 7, No. 8, Feb., 1910, pp. 211–221, pl. 4.

Describes *Placostylus dorseyi* and *Chloritis camaratus* from the Solomon Islands, and lists other species collected. A series of cotypes are in the U. S. National Museum.

— A new Floridian *Amnicola*.

Nautilus, 24, No. 1, May, 1910, p. 2.

Amnicola harperi is described as new from Lake Panasoffkee, Florida. The types are in the U. S. National Museum.

DALL, WILLIAM HEALEY. On some land shells collected by Dr. Hiram Bingham in Peru.

Proc. U. S. Nat. Mus., 38, No. 1736, June 6, 1910, pp. 177–182, figs. 1–4.

Bulimulus (Lissoacme) binghami; *B. (L.) ptyalum*; and *Clausilia (Nenia) panpasensis* are described as new and figured. The description of the last mentioned was furnished by Dr. H. A. Pilsbry. The types are in the U. S. National Museum.

— Summary of the shells of the genus *Conus* from the Pacific Coast of America in the U. S. National Museum.

Proc. U. S. Nat. Mus., 38, No. 1741, June 6, 1910, pp. 217–228.

This paper contains a systematic and nomenclatorial revision of the shells in question based on the literature and the material in the U. S. National Museum. The following new species and varieties are described: *Conus purpurascens* var. *rejectus*; *Conus edaphus*; *Conus princeps* var. *apogrammatus*; *Conus xanthicus*; and *Conus scariphus*.

— Robert Edwards Carter Stearns.

Science (n. s.) 30, No. 765, Aug. 27, 1909, pp. 279, 280.

An obituary notice of an old collaborator and former assistant curator of the National Museum. Subsequently summarized in the *Nautilus*, 23, p. 70.

— Ludwig Rudolph Sophus Bergh.

Science (n. s.), 30, No. 766, Sept. 3, 1909, p. 304.

An obituary notice of a distinguished naturalist and collaborator of the Museum. Subsequently summarized in the *Nautilus*, 23, p. 72.

— The Opisthobranchiate mollusca of the Branner-Agassiz Expedition to Brazil. By Frank Mace Macfarland.

Science (n. s.), 30, No. 774, Oct. 29, 1909, pp. 602, 603.

A review of the above paper, which is partly based on species in the U. S. National Museum.

— New species of West American shells.

Nautilus, 23, No. 11, Apr., 1910.

Olivella porteri, *Pomaulax turbanicus*, *Pachypoma magdalena*, and *P. lithophorum* are described as new. The types are in the U. S. National Museum.

DALL, WILLIAM HEALEY. Note on the summary of the mollusca of the Peruvian Province.

Nautilus, 23, No. 11, Apr., 1910, p. 144.

An explanatory note on the faunal list in *Proc. U. S. Nat. Mus.*, No. 1704.

— and PAUL BARTSCH. A monograph of West American | Pyramidellid Mollusks | By | William Healey Dall and Paul Bartsch | Of the Division of Mollusks, U. S. National Museum | (Seal) | Washington | Government Printing Office | 1909.

Bull. U. S. Nat. Mus., No. 68, Dec. 13, 1909, pp. i-xii, 1-258, pls. 1-30.

This volume attempts to enumerate, review, and systematize the group of Mollusks referred to and is based on the combined collections of the U. S. National Museum, many collectors, and several other museums. A very large number of new species is added to those previously known and the entire classification is carefully revised.

The following species are described as new: *Pyramidella bairdi*, *cerrosana*, *mexicana*, *mazatlanica*, *panamensis*; *Turbonilla ima*, *diegensis*, *acra*, *lucana*, *hypolispa*, *xypynota*, *santarosana*, *houseri*, *kelseyi*, *raymondi*, *stephanogyra*, *buttoni*, *asser*, *mexicana*, *attrita*, *nicholsi*, *calvini*, *carpentieri*, *simpsoni*, *profundicola*, *galianoi*, *humerosa*, *aresta*, *pazana*, *galapagensis*, *phanea*, *imperialis*, *smithsoni*, *abreojensis*, *ridgwayi*, *halibrecta*, *gouldi*, *halia*, *alaskana*,

DALL, WILLIAM HEALEY—Continued.

painei, *keēpi*, *halistrepta*, *lituyana*, *annettae*, *verativa*, *obesa*, *pequensis*, *nuttingi*, *callia*, *superba*, *pluto*, *jewetti*, *signæ*, *aragoni*, *recta*, *weldi*, *nercia*, *antemunda*, *macbridei*, *nuttalli*, *macra*, *marshalli*, *almo*, *callipeplum*, *dina*, *shimeki*, *sanctorum*, *halidoma*, *ceraleva*, *lepta*, *hisiata*, *vickhami*, *lara*, *adusta*, *larunda*, *regina*, *catalinensis*, *ambusta*, *santosana*, *heterolopha*, *ignacia*, *periscelida*, *phalera*, *sedillina*, *hipolitensis*, *excolpa*, *andrewsi*, *arata*, *genilda*, *monilifera*, *eucosmia*, *swani*, *stenogyra*; *Odostomia laxa*, *richi*, *excelsa*, *acrybia*, *torrita*, *licina*, *talama*, *ritteri*, *rinella*, *eugena*, *trachis*, *lucca*, *clementina*, *oldroydi*, *loomisi*, *vicola*, *hipolitensis*, *lapazana*, *tyleri*, *scammonensis*, *pulcia*, *promeces*, *pulcherrima*, *vineta*, *helga*, *sanctorum*, *sapia*, *deceptrix*, *poppei*, *pedroana*, *hemphilli*, *xypynota*, *galapagensis*, *amilda*, *farma*, *enora*, *chilensis*, *fetella*, *hypocurta*, *nunivakensis*, *killisnoensis*, *esilda*, *aleutica*, *kadiakensis*, *herilda*, *nemo*, *io*, *pratoma*, *septentrionalis*, *capitana*, *unalaskensis*, *obesa*, *lucasana*, *phanella*, *santarosana*, *socorroensis*, *donilla*, *californica*, *serilla*, *amchitkana*, *stephensi*, *clessini*, *minutissima*, *raymondi*, *notilla*, *movilla*, *altina*, *profundicola*, *baranoffensis*, *hagemeisteri*, *resina*, *parella*, *granadensis*, *lastra*, *elsa*, *farallonensis*, *sillana*, *talpa*, *orca*, *arctica*, *moratoria*, *pesa*, *nota*, *iliuliukensis*, *subturruta*, *dotella*, *farella*, *dinella*, *coronadoensis*.

The following new names are proposed for species with untenable names: *Turbonilla centrota*, *paramoca*, *javilla*; *Odostomia tropidita*, *callimorpha*, *oonisca*, *virginalis*, *defolinia*, *difficilis*, *benthina*, *orariana*, *eucosmia*.

INSECTS.

BANKS, NATHAN. Directions for collecting and | preserving insects | By | Nathan Banks, | In collaboration with various members of the Bureau of Entomology, | Department of Agriculture | (Seal) | Washington | Government Printing Office | 1909.

Bull. U. S. Nat. Mus., No. 67, Oct. 7, 1909, pp. i-xiii, 1-135, 1 pl., figs. 1-188.

BUSCK, AUGUST. Notes on Microlepidoptera, with descriptions of new North American species.

Proc. Ent. Soc. Washington, 11, No. 2, Apr.-June, 1909, pp. 87-103, 1 fig.

Describes 1 new family, 2 new genera, and 12 new species.

BUSCK, AUGUST. Notes on the Family *Ægeriidae* (Sesiidae), with a synoptic table of the North American genera.

Proc. Ent. Soc. Washington, 11, No. 3, July-Sept., 1909, pp. 115-118.

— New Microlepidoptera from New Mexico and California and a synoptic table of the North American species of *Heliodines* Stainton.

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec., 1909, pp. 175-187.

Describes 21 new species.

— A new Tortricid of economic importance in the Hawaiian Islands.

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec., 1909, pp. 201, 202.

BUSCK, AUGUST. Two new species of Mexican Tineids.

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec., 1909, pp. 212, 213.

— A new *Gelechia* inquilinous in Cecidomyiid galls.

Can. Ent., 42, No. 5, May, 1910, p. 168.

— Two new American species of the genus *Ethmia*.

Proc. Ent. Soc. Washington, 12, No. 1, Jan.-Mar., 1910, pp. 53, 54.

— New species of the genus *Stenoma* from Costa Rica.

Proc. Ent. Soc. Washington, 12, No. 2, Apr.-June, 1910, p. 80.
Describes 2 new species.

CAUDELL, A. N. The copulating and feeding habits of *Idiarthron astrispinus* Stal.

Proc. Ent. Soc. Washington, 11, No. 1, Jan.-Mar., 1909, pp. 40, 41.

— Miscellaneous notes on Orthoptera.

Proc. Ent. Soc. Washington, 11, No. 3, July-Sept., 1909, pp. 111-114.

— The Decticinean genus *Rehnia* Caud. (Orthoptera.)

Psyche, 16, No. 4, Aug., 1909, pp. 94, 95.

— A new *Xiphidion* from Northern Georgia.

Ent. News, 21, No. 2, Feb., 1910, pp. 58, 59.

— A new Mantis from British Guiana.

Zoologica, 1, No. 4, Jan. 15, 1910, pp. 123, 124, 1 fig.

— Notes on Orthoptera.

Proc. Ent. Soc. Washington, 12, No. 2, Apr.-June, 1910, pp. 95-97.

COCKERELL, T. D. A. Descriptions of some bees in the U. S. National Museum.

Proc. U. S. Nat. Mus., 36, No. 1674, May 13, 1909, pp. 411-420.
Describes one new species, one new subspecies; also redescribes some of the types of new genera described by Dr. Ashmead.

COCKERELL, T. D. A. The North American bees of the genus *Nomia*.

Proc. U. S. Nat. Mus., 38, No. 1745, June 14, 1910, pp. 289-298.

Describes 4 new species and one new subspecies.

COQUILLETT, D. W. A new Stratiomyid from Texas.

Can. Ent., 41, No. 7, July, 1909, p. 212.

— Three new Trypetidae from the Pacific Islands.

Ent. News, 21, No. 1, Jan., 1910, pp. 12, 13.

— New species of North American Diptera.

Can. Ent., 42, No. 2, Feb., 1910, pp. 41-47.

CRAWFORD, J. C. New Chalcidoidea.

Proc. Ent. Soc. Washington, 11, No. 1, Jan.-Mar., 1909, pp. 51, 52.

Describes one new genus and 2 new species.

— A new family of Parasitic Hymenoptera.

Proc. Ent. Soc. Washington, 11, No. 2, Apr.-June, 1909, pp. 63, 64, pl. V.

Describes a new family based on a new species and genus.

— Two new species of the genus *Teatrastichus*.

Proc. Ent. Soc. Washington, 11, No. 3, July-Sept., 1909, p. 150.

— New Parasitic Hymenoptera.

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec., 1909, pp. 203-207.

Describes 7 new species.

— A new *Chalcis* from China.

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec., 1909, p. 207.

— Descriptions of certain Chalcidoid parasites.

U. S. Dept. Agric., Bur. Ent., Tech. Ser., No. 19, pt. 2, Apr. 30, 1910, pp. i-v, 13-24, figs. 8-22.

Describes 8 new species.

— Three new genera and species of parasitic Hymenoptera.

Proc. U. S. Nat. Mus., 38, No. 1730, May 3, 1910, pp. 87-90, figs. 1-5.

CRAWFORD, J. C. New Hymenoptera from the Philippine Islands.

Proc. U. S. Nat. Mus., 38, No. 1733, May 3, 1910, pp. 119-133.

Describes 3 new genera, one new subgenus, and 28 new species.

DAVIS, JOHN J. Two new genera and species of Aphididæ.

Ann. Ent. Soc. Amer., 2, No. 3, Sept., 1909, pp. 196-200, pl. xxvii.

The type slide of one species and the co-type slide of the other are deposited in the U. S. National Museum.

DYAR, HARRISON G. Descriptions of some new species and genera of Lepidoptera from Mexico.

Proc. U. S. Nat. Mus., 38, No. 1742, June 7, 1910, pp. 229-273.

Describes 4 new genera, 92 new species, and 5 new varieties.

——— New species of American Lepidoptera.

Proc. Ent. Soc. Washington, 11, No. 1, Jan.-Mar., 1909, pp. 19-29.

Describes 2 new genera and 21 new species.

——— Description of a new species of Euclea with its larva.

Proc. Ent. Soc. Washington, 11, No. 3, July-Sept., 1909, pp. 156-158.

——— The life history of an oriental species of Cochlidiidæ introduced into Massachusetts (*Cnidocampa flavescens* Walker).

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec., 1909, pp. 162-170, pl. xiv.

——— Description of another unidentified notodontian larva.

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec., 1909, pp. 171, 172.

——— Description of the larva of *Eus-trotia caduca* Grote.

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec., 1909, p. 200.

——— A new species of *Acrobasis*.

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec., 1909, p. 214.

DYAR, HARRISON G. New species of Lepidoptera from British Guiana.

Zoologica, 1, No. 4, Jan., 1910, pp. 125-138, figs. 41, 42.

Describes 21 new species and 5 new genera.

——— A new *Euclea*.

Proc. Ent. Soc. Washington, 12, No. 1, Jan.-Mar., 1910, p. 26.

——— The larva and food-plant of *Glyptocera consobrinella* Zeller.

Proc. Ent. Soc. Washington, 12, No. 1, Jan.-Mar., 1910, p. 52.

——— Two new species of *Lætilia* ragonot.

Proc. Ent. Soc. Washington, 12, No. 1, Jan.-Mar., 1910, p. 54.

——— Notes on the species of *Magalopyge* allied to *opercularis* Smith & Abbott.

Proc. Ent. Soc. Washington, 12, No. 2, Apr.-June, 1910, pp. 73, 74.

Describes one new species.

——— Descriptions of new South American Lepidoptera.

Proc. Ent. Soc. Washington, 12, No. 2, Apr.-June, 1910, pp. 83-86.

Describes one new genus and 11 new species.

——— and FREDERICK KNAB. On the identity of *Culex pipiens* Linnaeus.

Proc. Ent. Soc. Washington, 12, No. 1, Jan.-Mar., 1909, pp. 30-39, pls. 1-3.

——— Description of a new mosquito from Cuba.

Proc. Ent. Soc. Washington, 12, No. 1, Jan.-Mar., 1909, p. 39.

——— Description of three new American mosquitoes.

Proc. Ent. Soc. Washington, 12, No. 4, Oct.-Dec., 1909, pp. 173, 174.

——— The genus *Mansonia*.

Ent. News, 21, No. 6, June, 1910, pp. 259-264.

——— On the identity of *Culex pallidohirta*.

Proc. Ent. Soc. Washington, 12, No. 2, Apr.-June, 1910, pp. 81, 82.

ELY, CHAS. R. New species of North American Microlepidoptera.

Proc. Ent. Soc. Washington, 12, No. 2, Apr.-June, 1910, pp. 67-70.

Describes 1 new genus and 6 new species; the types are in the U. S. National Museum.

GAHAN, A. B. A new species of Pteromalidæ.

Can. Ent., 41, No. 12, Dec., 1909, p. 431.

The type is in the National Museum.

—— Four new species of Hymenoptera, *Can. Ent.*, 42, No. 6, June, 1910, pp. 205-208.

Types deposited in the National Museum.

GIRAULT, A. A. The chalcidoid parasites of the coccid *Eulecanium nigrofasciatum* (Pergande), with descriptions of three new North American species of the sub-families Encyrtinæ and Aphelininæ from Illinois.

Psyche, 16, No. 4, Aug., 1909, pp. 75-86.

Cotypes of 12 species deposited in the Museum.

HAYHURST, PAUL. Observations on two species of *Hyalopterus* (Aphididæ).

Journ. N. Y. Ent. Soc., 17, No. 3, Sept., 1909, pp. 107-115, pl. I.

One new species; the type is in the U. S. National Museum.

HEIDEMANN, O. Two new species of North American Aradidæ (Hemiptera, Aradidæ).

Proc. Ent. Soc. Washington, 11, No. 4, Oct.-Dec. 1909, pp. 189-191, figs. 3, 4.

HOWARD, L. O. The parasites reared or supposed to have been reared from the eggs of the gipsy moth.

U. S. Dept. Agric., Bur. Ent., Tech. Ser., No. 19, Pt. 1, Jan. 28, 1910, pp. i-vi, 1-12, figs. 1-7.

Describes 3 new genera and 3 new species.

—— Two new Aphelinine parasites of scale insects.

Ent. News, 21, No. 4, Apr., 1910, pp. 162, 163.

KNAB, FREDERICK. Some species of *Caligrapha*.

Proc. Ent. Soc. Washington, 11, No. 2, Apr.-June, 1909, pp. 83-87.

Describes 3 new species.

—— Nuptial colors in the Chrysomelidæ.

Proc. Ent. Soc. Washington, 11, No. 3, July-Sept., 1909, pp. 151-153.

—— The identification of *Culex cyanus* Fabricius.

Proc. Ent. Soc. Washington, 11, No. 3, July-Sept., 1909, pp. 154-156.

KNAB, FREDERICK. The new Philippine Culicidæ.

Ent. News, 20, No. 9, Nov., 1909, pp. 386-388.

PIERCE, W. DWIGHT. A monographic revision of the twisted winged insects comprising the order Strepsiptera Kirby | By | W. Dwight Pierce | of the Bureau of Entomology, U. S. Department of Agriculture | (Seal) | Washington | Government Printing Office | 1909

Bull. U. S. Nat. Mus., No. 66, Dec. 6, 1909, pp. i-xii, 1-232, pls. I-XV, figs. 1-3, 1 map.

Describes 4 new tribes, 10 new genera, 2 new subgenera, 59 new species and 1 new variety.

—— Studies of North American weevils.

Proc. U. S. Nat. Mus., 37, No. 1708, Dec. 11, 1909, pp. 325-364.

Describes 12 new species from the collections of the U. S. National Museum.

ROHWER, S. A. Notes on Tenthredinoidea, with descriptions of new species. Paper No. 6, Western Macrophyæ.

Can. Ent., 41, No. 9, Sept., 1909, pp. 327-334.

Describes 7 new species.

—— Notes on Tenthredinoidea, with descriptions of new species. Paper No. 7, New Blennocampinæ.

Can. Ent., 41, No. 11, Nov., 1909, pp. 397-399.

Describes 1 new genus and 1 new species.

—— Notes on Tenthredinoidea, with descriptions of new species. Paper No. 8, New species from California.

Can. Ent., 42, No. 2, Feb., 1910, pp. 49-52.

Describes 1 new genus and 1 new species.

—— Notes on Tenthredinoidea, with descriptions of new species. Paper No. 9, Xyelidæ and Lydidæ.

Can. Ent., 42, No. 3, Mar., 1910, pp. 88-93.

Describes 9 new species.

—— Notes on Tenthredinoidea, with descriptions of new species. Paper No. 10, New species of Empriæ.

Can. Ent., 42, No. 5, May, 1910, pp. 172-175.

—— Notes on Tenthredinoidea, with descriptions of new species. Paper No.

ROHWER, S. A.—Continued.

- 11, Genera of Pamphiliinae and new species.

Can. Ent., 42, No. 6, June, 1910,
pp. 215-220.

Describes 6 new species.

- A genus of Eumenid wasps new to North America.

Ent. News, 20, No. 8, Oct., 1909,
pp. 357, 358.

Describes 1 new species.

- Some new wasps.

Ent. News, 20, No. 9, Nov., 1909,
pp. 369-372.

Describes 4 new species.

- Notes and descriptions of some Trypoxline wasps.

Ent. News, 20, No. 9, Nov., 1909,
pp. 377-382.

Describes 4 new species and 1 new subspecies.

- Three new Psenid wasps from New Jersey.

Ent. News, 21, No. 4, Apr., 1910,
pp. 168-170.

- A new genus of sawflies from Chili.

Proc. Ent. Soc. Washington, 12,
No. 1, Jan.-Mar., 1910, p. 30.

- Some new wasps from New Jersey.

Proc. Ent. Soc. Washington, 12,
No. 1, Jan.-Mar., 1910, pp. 49-52.

Describes 6 new species.

- Descriptions of new Psenid wasps from the United States.

Proc. Ent. Soc. Washington, 12,
No. 2, Apr.-June, 1910, pp. 99-104.

Eight new species and one new variety.

- On a collection of Tenthredinoidea from Eastern Canada.

Proc. U. S. Nat. Mus., 38, No.
1739, June 6, 1910, pp. 197-209.

Twelve new species described.

- ROHWER, S. A. Some new Chrysidid wasps from Western United States.

Psyche, 16, No. 4, Aug., 1909,
pp. 87-92.

Six new species and 1 new subspecies described.

- VIERECK, H. L. Descriptions of new Hymenoptera.

Ent. News, 20, No. 7, July, 1909,
pp. 290-292.

Describes 5 new species.

- Descriptions of new Hymenoptera.

Proc. Ent. Soc. Washington, 11,
No. 1, Jan.-Mar., 1909, pp. 42-51,
figs. 1, 2.

Describes 5 new genera, a new subgenus, and 11 new species.

- New species of Andrena.

Proc. Ent. Soc. Washington, 11,
No. 3, July-Sept., 1909, pp. 143,
144.

Describes 2 new species.

- Bracon (Melanobracon) webbi n. sp.

U. S. Dept. Agric., Bur. Ent.,
Bull. 58, Pt. 4, Nov. 10, 1909
p. 54, figs. 23, 24.

- Hymenoptera for the New Jersey list of insects, and other Hymenoptera.

Proc. Ent. Soc. Washington, 11,
No. 4, Oct.-Dec., 1909, pp. 208-211.

Describes 6 new species.

- WILLIAMSON, EDWARD BRUCE. The North American dragonflies (Odonata) of the genus *Macromia*.

Proc. U. S. Nat. Mus., 37, No.
1710, Dec. 14, 1909, pp. 369-398,
pls. 35, 36.

ARACHNIDS.

- BANKS, NATHAN. Catalogue of Nearctic Spiders | By | Nathan Banks | Custodian, Section of Arachnida, U. S. National Museum | (Seal) | Washing-

- BANKS, NATHAN—Continued.
ton | Government Printing Office | 1910.

Bull. U. S. Nat. Mus., No. 72,
Apr. 30, 1910, pp. i-iii, 1-80.

PYCNOGONIDA.

COLE, LEON J. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. N., commanding.

xix. Pycnogonida.

Bull. Mus. Comp. Zool., 52, No. 11, Aug., 1909, pp. 185-192, pls. 1-3.

Only 6 specimens were obtained, representing 3 species, one of which was previously undescribed, *Colossendeis cucurbita*, from a depth of 2,005 fathoms, midway between Peru and the Galapagos Islands.

COLE, LEON J. Peculiar habitat of a Pycnogonid (*Endeis spinosus*) new to North America, with observations on the heart and circulation.

Biological Bulletin, xviii, No. 4, March, 1910, pp. 193-203, text figs. 1 and 2.

Based on observations made at the United States Fisheries laboratory at Woods Hole, Mass., during the summer of 1904, 1905, and 1906. Describes the extended range of *Endeis spinosus*, its pelagic habitat on the American side of the Atlantic, its circulation, reaction to light, etc.

CRUSTACEANS.

BOUVIER, E. L. (See under Alphonse Milne Edwards.)

COUTIÈRE, HENRI. The Snapping Shrimps (*Alpheidae*) of the Dry Tortugas, Florida.

Proc. U. S. Nat. Mus., 37, No. 1716, Jan. 20, 1910, pp. 485-487, figs. 1-3.

Based on a small collection obtained by Dr. J. F. McClendon at the Tortugas while pursuing investigations at the Carnegie laboratory. A new species, *Synalpheus mcclendoni*, and a new subspecies, *S. townsendi scaphoceris*, are included among the eight forms noted.

DOOLITTLE, ALFRED A. New Cladocera from New England.

Proc. Biol. Soc. Wash., 22, July 28, 1909, pp. 153-156.

A new genus, *Parophryoxus*, of the family Macrothricidae, and two new species are described from Maine and New Hampshire.

The type material is to be deposited in the U. S. National Museum.

EDWARDS, ALPHONSE MILNE, and E. L. BOUVIER. Reports on the results of dredging, under the supervision of Alexander Agassiz, in the Gulf of Mexico (1877-78), in the Caribbean Sea (1878-79), and along the Atlantic coast of the United States (1880), by the U. S. Coast Survey steamer Blake, Lieut. Com. C. D. Sigsbee, U. S. N., and Commander J. R. Bartlett, U. S. N., commanding.

xliv. Les Pénéides et Sténopides.

Mem. Mus. Comp. Zool., 27, No. 3, Aug., 1909, pp. 181-274, pls. 1-9, text figs. 1-91.

EDWARDS, ALPHONSE MILNE, and E. L. BOUVIER—Continued.

Based chiefly on material collected by the U. S. Coast Survey steamer Blake in 1877-78, with additions obtained by Dr. William Stimpson at the Florida Keys, and by the U. S. Coast Survey steamer Hassler.

Twenty-two species (four new) of Penaeids and one species of Stenopids are described. Tables of distribution are given of all tropical Atlantic and Mediterranean forms of the two families, and keys to the subfamilies and genera.

EMBODY, GEORGE C. A new fresh-water Amphipod from Virginia, with some notes on its biology.

Proc. U. S. Nat. Mus., 38, No. 1746, June 18, 1910, pp. 299-305, figs. 1-17.

The new species, *Eucrangonyx serratus*, is described in detail; also the characters of the young, and the differences between that species and *E. gracilis* (Smith).

PILSBRY, HENRY A. A new species of Scalpellum from British Columbia.

Proc. Acad. Nat. Sci. Phila., 41, Pt. 2, July, 1909, pp. 367, 368, figs. 1, 2.

Description of *Scalpellum (Arcoscalpellum) columbianum*, sp. nov., from Lowe Inlet, collected by the Rev. George W. Taylor.

Report on barnacles of Peru, collected by Dr. R. E. Coker and others.

Proc. U. S. Nat. Mus., 37, No. 1700, Oct. 18, 1909, pp. 63-74, pls. 16-19, text figs. 1, 2.

A summary of our knowledge of Peruvian Cirripedia. Fourteen species have

PILSBRY, HENRY A.—Continued.

been noted. The author describes specimens collected by Dr. R. E. Coker and Dr. W. H. Jones, U. S. Navy, and includes one new species.

RATHBUN, MARY J. The marine crustacea.

Appendix II in "*Labrador, The Country and the People*," by Wilfred T. Grenfell and others; The Macmillan Company, New York, Nov., 1909, pp. 447-452.

A general account of the distribution and habits of the more abundant Crustacea of Labrador.

List of Crustacea on the Labrador Coast.

Appendix VI in "*Labrador, The Country and the People*," by Wilfred T. Grenfell and others; The Macmillan Company, New York, Nov., 1909, pp. 480-487.

A complete list of all the species of the Labrador coast with their localities; all previous records are combined with those furnished by collections in the U. S. National Museum obtained by Mr. Owen Bryant and Mr. Lucien M. Turner.

RICHARDSON, HARRIET. Collections Recueillies par M. Maurice de Rothschild dans l'Afrique Orientale Anglaise.—Isopodes terrestres nouveaux.

Bull. Mus. d'Hist. Nat., Paris, May 24, 1909, No. 4, pp. 156-163.

A preliminary paper, in which are described six species, one of which repre-

RICHARDSON, HARRIET—Continued.

sents a new genus, *Hiallides*, of the Eubelidæ.

Isopods collected in the north-west Pacific by the U. S. Bureau of Fisheries steamer Albatross in 1906.

Proc. U. S. Nat. Mus., 37, No. 1701, Oct. 22, 1909, pp. 75-129, figs. 1-50.

Sixty-three species are listed, of which twenty-nine are described as new. There are three new genera; *Holotelson* (Sphæromidæ), *Microprotus* (Janiridæ), and *Prophryxus* (Dajidæ).

Description of a new terrestrial isopod from Guatemala.

Proc. U. S. Nat. Mus., 37, No. 1718, Feb. 2, 1910, pp. 495-497, 1 fig.

Globarmadillo armatus, a new genus and species of the family Armadillidæ, resembling in appearance *Acanthoniscus spiniger* Kinahan.

Report on isopods from Peru, collected by Dr. R. E. Coker.

Proc. U. S. Nat. Mus., 38, No. 1729, May 3, 1910, pp. 79-85, figs. 1-6.

Three species were taken by Dr. Coker, two of them new, and one representing a new genus, *Orbimorphus*, of the family Bopyridæ. The list of isopods of Peru is made complete by an additional notice of two species previously recorded.

ECHINODERMS.

AGASSIZ, ALEXANDER. "Globiferen" and "Cystacanthus."

Zool. Anzeiger, 34, Nos. 20, 21, Aug. 10, 1909, p. 623.

Announces the identity of his "Cystacanthus" with the previously discovered "Globiferen" of Hamann.

CLARK, AUSTIN HOBART. Five new species of recent unstalked crinoids.

Proc. U. S. Nat. Mus., 37, No. 1697, Aug. 23, 1909, pp. 29-34.

The following new species are described: *Comanthus (Comanthus) pinguis* (southern Japan); *C. (C.) samoana* (Samoa); *Craspedometra aliena* (Tataa Islands); *Amphimetra parilis* (Balinpongpong Island); *Ptilometra splendida* (between Tablas and Romblon, Philippine Islands).

CLARK, AUSTIN HOBART. New genera and higher groups of unstalked crinoids.

Proc. Biol. Soc. Washington, 22, Sept. 14, 1909, pp. 173-178.

The following genera are diagnosed: *Neocomatella* (Capillasterinæ); *Pterometra* (Tropiometridæ); *Balanometra* (Zenometrinæ).

The following new family is suggested: Pontiometrinæ (Oligophreata).

The following new subfamilies are suggested: Capillasterinæ (Comasteridæ); Comactinlinæ (*idem*); Comasterinæ (*idem*); Himerometrinæ (Himerometridæ); Stephanometrinæ (*idem*); Mariametrinæ (*idem*); Antedoninæ (Antedonidæ); Perometrinæ (*idem*); Zenometrinæ (*idem*); Heliometrinæ (*idem*); Thyssanometrinæ (*idem*); Bathymetrinæ (*idem*).

CLARK, AUSTIN HOBART—Continued.

The following new suborders are suggested: Comatulida Innatantes, Comatulida Oligophreata, Comatulida Macrophreata.

A new type of articulation, called the pseudosyzygy, is described and discussed.

— The nonmuscular articulation of crinoids.

Amer. Naturalist, 43, No. 511, Oct., 1909, pp. 577-587, figs. 1-14.

A dissertation upon the phylogenetical significance and systematic importance of articulations, showing that articulations consisting only of ligaments probably arose through a doubling of the more primitive muscular articulations coupled with a loss of the muscles, possibly correlated with the transition from a biserial to a monoserial type of arm.

— A new European crinoid.

Proc. U. S. Nat. Mus., 38, No. 1749, June 18, 1910, pp. 329-333.

A new species of *Antedon*, *A. adriatica*, is described from Trieste, and its embryology is compared with that of *A. mediterranea* as worked out by Bury and Barrois, and of *A. bifida* as worked out by Wyville Thomson and the two Carpenters. It is suggested that possibly the latter did not err in denying the presence of underbasals in *A. bifida*.

— A proposed division of the Phylum Echinodermata.

Proc. Biol. Soc. Washington, 22, Oct. 30, 1909, pp. 183, 184.

The Crinoidea are shown to be most nearly related to the Echinoidea and Holothuroidea, and are placed with them in the subphylum Echinodermata Heteroradiata, in contradistinction to the Asteroidea and Ophiuroidea, which are united to form the subphylum Echinodermata Astroradiata.

— The affinities of the Echinoidea.

Amer. Naturalist, 43, Nov., 1909, pp. 682-686.

This is an elaboration of the previous paper.

— On a collection of crinoids from the Zoological Museum of Copenhagen, including the description of a new species of *Eulima*, by Dr. Paul Bartsch.

Vidensk. Medd. fra den Naturhist. Forening i København, 1909, pp. 115-194.

This is a detailed account of a large collection of comatulids including many of the specimens which served as a basis for Professor Lütken's MS. names. A large number of the specimens were taken at Singapore by the Danish consul at that

CLARK, AUSTIN HOBART—Continued.

port, Mr. Svend Gad. In the introduction many features of ecology and distribution are discussed at length, and in an appendix is given a list of the crinoids known from Singapore. A small parasitic gastropod was found on one of the specimens, which is described by Dr. Paul Bartsch in a short paper following the above.

— Origin of the crinoidal muscular articulations.

Amer. Journ. Sci., 29, Art. 2, Jan., 1910, pp. 40-44, figs. 1-5.

The derivation of the complex muscular articulations of the crinoid arm from the simple connectives of simple ambulacral plates such as those of the echinoids is traced. The muscle bundles are, collectively, the equivalent of the intersomatic muscles of the echinothurids or the longitudinal muscles of the holothurians, and are not, as is commonly supposed, derived indirectly from amorphous connective tissue.

— A new crinoid from the Solomon Islands.

Proc. Biol. Soc., Washington, 23, Mar. 23, 1910, pp. 7, 8.

A new species of *Colobometra*, *C. diademata*, is described from Ugi, Solomon Islands. The type is in the Australian Museum, Sydney, N. S. W.

— The probable origin of the crinoidal nervous system.

Amer. Naturalist, 44, Apr., 1910, pp. 243, 244.

The nervous system of the crinoids is derived directly from that of the arthropod, or, rather, from the common echinoderm-arthropod ancestor, as a result of the progressive shortening of the antero-posterior axis of the body, which has culminated in a sessile habit and, further, in a pentamerous radial symmetry. The nervous system of the crinoids is shown to be essentially the same as that of the arthropods, and the orientation of the crinoids and the arthropods is compared.

— Remarks on the pentamerous symmetry of the crinoidea.

Amer. Journ. Sci., 29, Apr., 1910, pp. 353-357, 1 fig.

The pentamerous symmetry of the crinoidea is derived from that of the bilaterally symmetrical animals by the interpolation, between the two elements of the anterior pair of appendages, of another element equal to one-half of that anterior pair. Echinoderms are derived from bilaterally symmetrical animals very near the arthropod stock, which possessed an anterior and a posterior pair of appen-

CLARK, AUSTIN HOBART—Continued.

dages; the addition of half of a pair between the two elements of the anterior pair, at first by mutation, as in the specimen of *Platysamia cecropia* figured, caused in these sessile animals no inconvenience, and therefore became fixed, resulting in a more or less perfect pentamerous symmetry in which the odd (anterior) ray is always the most primitive in structure and the least stable in appearance, being frequently absent, while the other rays are invariably present.

Echinoderm larvæ are bilaterally symmetrical; but they are in all essentials highly specialized animals of quite a different class, fitted for an entirely different mode of existence, and are only comparable to the adults, ontogenetically and phylogenetically, in the same way as insect larvæ are comparable to adult insects. The echinoderms in their life phases and, in general, in their structure, are more or less strictly comparable to those insects which undergo a complete metamorphosis.

— An interesting structural analogy.

Ann. Mag. Nat. Hist., 8th ser., 5, Apr., 1910, pp. 358-361, figs. 1, 2.

Attention is called to the curious similarity between the so-called "side-" and "covering-plates" of crinoids and the "snow-shoes" of certain grouse, as seen in *Bonasa umbellata*. The perfect development of these plates in deep water forms only is noted, and correlated with the fact that they feed only upon dead food particles which fall upon these plates and glance from them into the ambulacral grooves.

— The phylogenetic interrelationships of the recent crinoids.

Proc. U. S. Nat. Mus., 38, No. 1732, May 3, 1910, pp. 115-118.

This paper treats of the phylogenetic interrelationships of the recent crinoids without regard to their fossil representatives; the characters chiefly employed are found in the stem and in the basals.

— On the type specimen of the crinoid described by Müller as *Alecto purpurea*.

Proc. Biol. Soc. Washington, 23, May 27, 1910, pp. 95-98, 1 fig.

The type specimen of *Alecto purpurea*, described by Prof. Johannes Müller in 1841, is described in detail and figured. The species is quite distinct from any other known form, though nearly related to the *Asterias pectinata* of Linnæus. It occurs, so far as now known, only in Queensland.

CLARK, AUSTIN HOBART. On the origin of certain types of crinoid stems.

Proc. U. S. Nat. Mus., 38, No. 1740, June 6, 1910, pp. 211-216.

The origin of the crinoid stem from the primitive dorsocentral echinoderm plate is traced and all the various types are shown to converge toward it. The absence of this plate in the so-called "Palæoechinoidea" is explained by the great specialization of the test in this group whereby this primitive structure has been lost, though persisting in the less specialized recent forms.

— A new Australian crinoid.

Proc. U. S. Nat. Mus., 38, No. 1743, June 7, 1910, pp. 275-276.

A new species of *Compsometra*, *C. lacer-tosa*, is described from Port Jackson, New South Wales, the type being in the Australian Museum at Sydney. This species was mentioned by P. H. Carpenter in 1890, but was not diagnosed by him; his specimens were from Port Phillip.

— The strict application of the law of priority to generic names.

Science (n. s.), 31, No. 787, Jan. 28, 1910, pp. 145, 146.

The preliminary results of an exhaustive canvass among scientific men to determine the existing sentiment in regard to the strict application of the international code of nomenclature is given, and it is shown that some modification of the code is urgently called for because of the deplorable results of the application of it in its present form.

FISHER, WALTER K. New Pterasteridae from the North Pacific.

Ann. Mag. Nat. Hist., 8th ser., 5, Feb., 1910, pp. 167-170.

Describes four new species of *Pteraster* and two of *Hymenaster*, and gives keys, including other North Pacific species.

— New genera of starfishes.

Ann. Mag. Nat. Hist., 8th ser., 5, Feb., 1910, pp. 171-173.

Describes four new genera, *Thrissacanthias*, *Gephyreaster*, *Sphaeriodiscus*, and *Heterozonias*, and defines the limits of *Pentagonaster*, *Tosia*, and others.

— New starfishes from the North Pacific.—I. Phanerozonia.

Zool. Anzeiger, 35, No. 18, Mar. 29, 1910, pp. 545-553.

Thirteen new species and two new subspecies are diagnosed and keys are given including all of the North Pacific species of *Dipsacaster*, *Benthopecten*, and *Acantharchaster*.

FISHER, WALTER K. New starfishes from the North Pacific.—II. Spinulosa.

Zool. Anzeiger, 35, No. 18, Mar. 29, 1910, pp. 568-574.

Diagnoses five new species and four new subspecies belonging to the genera *Poraniopsis*, *Henricia*, *Solaster*, and *Lophaster*.

McCLENDON, J. F. Contributions from the laboratory of the Marine Biological Association of San Diego. xxv. The Ophiurans of the San Diego Region.

Univ. Cal. Pub. Zool., 6, No. 3, July 15, 1909, pp. 33-64, pls. 1-6.

The result of studies carried on at the Marine Biological Station at La Jolla.

McCLENDON, J. F.—Continued.

The ophiuran fauna was found to comprise twenty species, five of which are described as new.

VERRILL, A. E. Descriptions of new genera and species of starfishes from the North Pacific coast of America.

Amer. Journ. Sci., 4th ser., 28, July, 1909, pp. 59-70, figs. 1-6.

Eleven new species, two new varieties, and one new genus, *Allasterias*, are described. Only four species and two varieties are based on material in the National Museum.

WORMS, COELENTERATES, PORIFERA, PROTOZOA, ETC.

ANNANDALE, NELSON. Fresh-water sponges collected in the Philippines by the Albatross Expedition. (Scientific results of the Philippine cruise of the Fisheries steamer Albatross, 1907-10.—No. 3.)

Proc. U. S. Nat. Mus., 37, No. 1702, Oct. 23, 1909, pp. 131, 132.

Describes two new species, *Spongilla microclerifera* and *S. philippinensis*, both belonging to the subgenus *Euspongilla*.

— Fresh-water sponges in the collection of the United States National Museum.—Pt. 2. Specimens from North and South America.

Proc. U. S. Nat. Mus., 37, No. 1712, Dec. 22, 1909, pp. 401-406, figs. 1-3.

Notes six species and figures details of three of them. Distributes the species of the genus *Carterius* between *Heteromeyenia* and *Ephydatia*.

— Fresh-water sponges in the collection of the United States National Museum.—Pt. 3. Description of a new species of *Spongilla* from China.

Proc. U. S. Nat. Mus., 38, No. 1737, June 6, 1910, p. 183.

Describes *Spongilla (Stratospongilla) sinensis*, new species, from the canal at Su-Chau, near Shanghai.

BIGELOW, HENRY B. Cruise of the U. S. Fisheries schooner Grampus in the Gulf Stream during July, 1908, with description of a new Medusa (Bythotiaridæ).

Bull. Mus. Comp. Zool., 52, No. 12, Aug., 1909, pp. 195-210, 1 pl., 1 map.

Gives an account of the apparatus and methods used and the results obtained for

BIGELOW, HENRY B.—Continued.

the surface, intermediate, and deep-sea faunas. Describes a new species of *Sibogita*, *S. nauarchus*, of the family Bythotiaridæ.

— Coelenterates from Labrador and Newfoundland, collected by Mr. Owen Bryant from July to October, 1908.

Proc. U. S. Nat. Mus., 37, No. 1706, Dec. 14, 1909, pp. 301-320, pls. 30-32.

Treats of the jellyfishes collected by Mr. Bryant along the east coast of Labrador and off the coast of Newfoundland. Gives notes on nineteen species, describes the young stages of *Catablena vesicaria* and certain anatomical features in *Aeginopsis laurentii*.

The first set of duplicates is in the U. S. National Museum.

CRAWLEY, HOWARD. Studies on blood and blood parasites. 1. Observations on mammalian blood with dark-field illumination. 2. The priority of *Cryptobia* Leidy, 1846, over *Trypanoplasma* Laveran and Mesnil, 1901. 3. *Trypanosoma americanum* n. sp., a trypanosome which appears in cultures made from the blood of American cattle.

(Preliminary notice.) *U. S. Dept. Agric., Bur. Animal Industry*, Bull. 119, Oct. 22, 1909, pp. 1-31, figs. 1-3.

Trypanosoma americanum, a parasite of cattle, is described as a new species and notes on its biology are given.

Cryptobia. The morphology and the generic relationships of *Cryptobia helicis* are discussed. It is shown that morphologically the type species of *Cryptobia* Leidy, 1846, and *Trypanoplasma* Laveran and Mesnil, 1901 (*Cryptobia helicis* Leidy,

CRAWLEY, HOWARD—Continued.

1846, and *Trypanoplasma borreli* Laveran and Mesnil, 1901, are congeneric, and that the generic name *Trypanoplasma* should therefore give way to the name *Cryptobia*.

CUSHMAN, JOSEPH AUGUSTINE. A monograph of the Foraminifera of the North Pacific Ocean | Part I. Astrorhizidæ and Lituolidæ | By | Joseph Augustine Cushman | of the Boston Society of Natural History | (Seal) | Washington | Government Printing Office | 1910.

Bull. U. S. Nat. Mus., No. 71,
June 30, 1910, pp. i-xiv, 1-134,
figs. 1-203.

This is the first part of a work the intent of which is to describe and illustrate the Foraminifera of the North Pacific Ocean; it includes the families Astrorhizidæ and Lituolidæ, together often known as the arenaceous foraminifera, and commonly considered the more primitive group.

A considerable number of changes in the nomenclature and systematic arrangement have been made in an attempt to separate more clearly species and groups which, after the study of the extensive material available, appear to be distinctive.

The collections upon which this monograph is based were brought together as a result of the work of the various vessels of the Navy Department, the Coast and Geodetic Survey, and the Bureau of Fisheries.

KOFOID, CHARLES ATWOOD. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. N., commanding. xx. Mutations in Ceratium.

Bull. Mus. Comp. Zool., 52, No. 13, Sept., 1909, pp. 213-257, pls. 1-4, text figs. A-E.

Discusses normal schizogony in *Ceratium*, the distribution of the genus, its division into five subgenera, the mutation of *C. tripos* to *C. californiense*, and between the latter and *C. ostensfeldi*. Reviews the earlier observations on mutations in Protista and discusses the significance of the phenomena. Concludes with a bibliography of the subject.

MOORE, J. PERCY. The polychætous annelids dredged by the U. S. S. Albatross off the coast of southern California

MOORE, J. PERCY—Continued.

in 1904.—I. Syllidæ, Sphærodoridæ, Hesionidæ, and Phyllodocidæ.

Proc. Acad. Nat. Sci. Phila., 41,
Pt. 2, June, 1909, pp. 321-351,
pls. 15, 16.

Based on a rich collection from Monterey Bay and southward, comprising twenty-one species, of which twelve are described as new.

The polychætous annelids dredged in 1908 by Mr. Owen Bryant off the coasts of Labrador, Newfoundland, and Nova Scotia.

Proc. U. S. Nat. Mus., 37, No. 1703, Oct. 25, 1909, pp. 133-146.

Fifty-one species are recorded, with notes; thirty-one are supposed to be new to the region, while six have not previously been reported from American waters.

RANSOM, BRAYTON HOWARD. The Tænioid Cestodes of North | American Birds | By | Brayton Howard Ransom | Assistant Custodian, Helminthological Collections, U. S. National Museum | (Seal) | Washington | Government Printing Office | 1909.

Bull. U. S. Nat. Mus., No. 69,
Dec. 31, 1909, pp. 1-141, figs. 1-42.

This includes a description of several new species, the type specimens of which are deposited in the Helminthological collection of the U. S. National Museum; a synopsis of the superfamily Tænioidæ, with generic diagnoses, and a list of all species of this superfamily occurring in North American birds.

ITTER, WM. E.¹ The ascidians collected by the United States Fisheries Bureau steamer Albatross on the coast of California during the summer of 1904.

Univ. Cal. Pub. Zool., 4, No. 1,
Oct. 26, 1907, pp. 1-52, pls. 1-3.

Deals with the offshore fauna only. Fourteen species were collected, all but two of which are new.

STILES, CHARLES WARDELL, and CHARLES GEORGE CRANE. The internal parasites of rats and mice in their relation to diseases of man.

Pub. Health Bull., U. S. P. H. and M. H. S., 1910, pp. 87-110, figs. 9-58.

One of several papers comprising the bulletin entitled "The rat and its relation to the public health."

¹ Omitted from Report for 1908.

STILES, CHARLES WARDELL, and JOSEPH GOLDBERGER. A study of the anatomy of *Watsonius* (n. g.) *watsoni* of man, and of nineteen allied species of mammalian trematode worms of the superfamily Paramphistomoidea.

Bull. 60, Hygienic Laboratory, U. S. P. H. and M. H. S., Apr., 1910, pp. 1-264, figs. 1-205.

STILES, CHARLES WARDELL, and ALBERT HASSALL. Compendium of animal parasites reported for rats and mice (genus *Mus*).

Pub. Health Bull., U. S. P. H. and M. H. S., 1910, pp. 111-122.

One of several papers comprising the bulletin entitled "The rat and its relation to the public health."

BOTANY.

BRITTON, N. L. and J. N. ROSE. The genus *Cereus* and its allies in North America.

Contr. U. S. Nat. Herb., 12, Pt. 10, July 21, 1909, pp. 413-437, pls. 61-76.

COLLINS, G. N. Apogamy in the maize plant.

Contr. U. S. Nat. Herb., 12, Pt. 10, July 21, 1909, pp. 453-455, pls. 84, 85.

COULTER, JOHN M. and J. N. ROSE. Supplement to the monograph of the North American Umbelliferae.

Contr. U. S. Nat. Herb., 12, Pt. 10, July 21, 1909, pp. 441-451, pls. 82, 83.

FINK, BRUCE. The lichens of Minnesota.

Contr. U. S. Nat. Herb., 14, Pt. 1, June 1, 1910, pp. i-viii, 1-269, ix-xvii, pls. 1-51, figs. 1-18.

GREENE, EDWARD L. Novitates Boreali-Americanae. iv.

Repertorium novarum specierum regni vegetabilis auctore F. Fedde, 7, Aug. 15, 1909, pp. 195-197.

Consists of descriptions of new species, one in *Chrysothamnus*; three in *Gutierrezia*, two in *Samolus*, and one in *Solidago*.

Novitates Boreali-Americanae. v.

Repertorium novarum specierum regni vegetabilis, auctore F. Fedde, 7, Sept. 20, 1909, pp. 252-255.

Consists of descriptions of 8 new species of *Thalictrum*.

Canadian species of *Thalictrum*.

II.

Ottawa Naturalist, 23, May 28, 1909, pp. 37-40.

Typical *T. dioicum* defined, and 3 new varieties of it described.

Ecology of a certain orchid.

Amer. Midland Naturalist, 1, Aug. 16, 1909, pp. 61-65.

The subject of this paper is *Cypripedium acaule*.

GREENE, EDWARD L. Some *Thalictra* from North Dakota.

Amer. Midland Naturalist, 1, Oct. 15, 1909, pp. 99-104.

Three new species of *Thalictrum*.

Certain Californian *Thalictra*.

Muhlenbergia, v, Oct. 23, 1909, pp. 128-131.

Thalictrum ametrum is proposed as a new name, and 3 new species of the genus are described.

Notes on the stemless Lady's Slipper.

Amer. Midland Naturalist, 1, Dec. 15, 1909, pp. 125-127.

Further ecologic study of *Cypripedium acaule*.

Rocky Mountain Botany.

Amer. Midland Naturalist, 1, Dec. 15, 1909, pp. 189-194.

Consists of a historical sketch of the later development of Rocky Mountain botany, and a review of recent books on that flora.

Landmarks of Botanical History, pt. 1.

Smithsonian Misc. Colls., 54, Jan. 1910, pp. 1-329.

Deals with botany and botanists of ancient Greece and Rome, and with Germans of the first half of the sixteenth century.

Three new *Eriogonums*.

Muhlenbergia, vi, Jan. 31, 1910, pp. 1-3.

Three new species from New Mexico and Texas.

New Californian Asteraceae.

Leaflets, 2, Feb. 19, 1910, pp. 25-31.

Consists of descriptions of 7 new species in *Corethrogyne* and 12 in *Lessingia*.

Some western caulescent violets.

Leaflets, 2, Feb. 19, 1910, pp. 32-34.

Descriptions of 6 new species of *Viola*.

GREENE, EDWARD L. Reconsideration of the genus *Marah*.

Leaflets, 2, Feb. 19, 1910, pp. 35, 36.

Marah is restored as a genus distinct from *Micrampelis*, and some new names of species are proposed.

— An oriental *Convallaria*.

Leaflets, 2, Feb. 19, 1910, p. 36.

Convallaria japonica is described as new.

— Nomenclature of the bayberries.

Leaflets, 2, Feb. 19, 1910, pp. 37-40.

An argument against the use of the name *Myrica* for the wax myrtle.

— Two new southern violets.

Leaflets, 2, Feb. 19, 1910, p. 41.

Viola planifolia and *V. Allardii*.

— Three new *Astragali*.

Leaflets, 2, Feb. 19, 1910, p. 42.

Astragalus subuniflorus, *A. pertenuis* and *A. gertrudis*.

— The genus *Downingia*.

Leaflets, 2, Feb. 19, 1910, pp. 43, 44.

The name *Boelia* is suppressed in favor of *Downingia*.

— Miscellaneous specific types. I.

Leaflets, 2, Feb. 19, 1910, pp. 45-48.

Contains descriptions of one new species in each of the genera *Claytonia*, *Pyrrcoma*, *Sanicula*, and *Solidago*, and 3 in *Arnica*.

— Some western species of *Arnica*.

Ottawa Naturalist, 23, Mar. 11, 1910, pp. 213-215.

Contains description of 6 new species.

— Studies of *Thalictracæ*. I.

Leaflets, 2, Mar. 29, 1910, pp. 49-59.

Family of the *Thalictracæ* proposed and 7 new species of *Thalictrum* described.

— Certain American roses.

Leaflets, 2, Mar. 29, 1910, pp. 60-63.

Review of the *Minutifolia* group, and descriptions of 3 new species.

— Some allies of *Hibiscus moscheutos*.

Leaflets, 2, Mar. 29, 1910, pp. 64-66.

Contains descriptions of 4 new species of *Hibiscus*.

— Two new lupines.

Leaflets, 2, Mar. 29, 1910, pp. 67, 68.

GREENE, EDWARD L. Canadian species of *Thalictrum*, 3.

Ottawa Naturalist, 24, May 7, 1910, pp. 25-30.

Discussion of status of the name *T. polygamum*; restoration of name *T. corynellum*; descriptions of 2 new species.

— Canadian species of *Thalictrum*, 4.

Ottawa Naturalist, 24, June 8, 1910, pp. 53-55.

Description of 3 new species.

— Some western species of *Arabis*.

Leaflets, 2, May 11, 1910, pp. 69-82.

New species to the number of 27.

— New *Papilionacæ*.

Leaflets, 2, May 11, 1910, pp. 83-85.

Descriptions of 3 new species of *Baptisia* and 2 of *Lupinus*.

— Miscellaneous specific types, 2.

Leaflets, 2, May 11, 1910, pp. 86-88.

In *Garrya*, *Lithophragma*, *Collomia*, and *Persicaria*, 1 new species each; in *Crepis* 3 new species.

LAMSON-SCRIBNER, F., and ELMER D.

MERRILL. The grasses of Alaska.

Contr. U. S. Nat. Herb., 13, Pt. 3, June 8, 1910, pp. 47-92, pls. 15, 16.

MAXON, WILLIAM R. *Schizæacæ* [of North America].

North Amer. Flora, 16, Nov. 6, 1909, pp. 31-52.

Includes descriptions of several new species of *Anemia*.

— *Gleicheniacæ* [of North America].

North Amer. Flora, 16, Nov. 6, 1909, pp. 53-63.

Includes description of 1 new species, *Dicranopteris underwoodiana*, from Mexico and Guatemala.

— (See also under Lucien M. Underwood.)

MERRILL, ELMER D. (See under F. Lamson-Scribner.)

PITTIER, HENRY. New or noteworthy plants from Colombia and Central America, 2.

Contr. U. S. Nat. Herb., 13, Pt. 4, June 11, 1910, pp. 93-132, pls. 17-20, figs. 2-41.

ROSE, J. N. Five new species of *Crasulacæ* from Mexico.

Contr. U. S. Nat. Herb., 12, Pt. 10, July 21, 1909, p. 439, pls. 77-81.

ROSE, J. N., and J. A. PURPUS. Three new species of *Echeveria* from southern Mexico.

Contr. U. S. Nat. Herb., 13, Pt. 2, Feb. 21, 1910, pp. 45, 46, pls. 10-14.

— (See also under N. L. Britton and J. M. Coulter.)

UNDERWOOD, LUCIEN M., and WILLIAM R. MAXON. Cyathecaceæ [of North America].

North Amer. Flora, 16, Nov. 6, 1909, pp. 65-68.

Includes treatment of the genus *Cyathea*, with 3 new species.

GEOLOGY AND MINERALOGY.

BASSLER, R. S. The cement resources of Virginia west of the Blue Ridge.

Virginia Geol. Surv., Bull. No. 2-A, 1909, pp. 1-309, pls. 1-30, figs. 1-30.

This report deals essentially with the limestones and shales—the cement-making rocks—of Appalachian Virginia, although the stratigraphy of all the rocks has been described in some detail. The Cambro-Ordovician rocks have received most attention, although the post-Ordovician rocks are discussed. Since practically nothing concerning the Paleozoic fossils of Virginia has appeared in the literature, plates of fossils, based upon Museum specimens, are inserted.

MERRILL, GEORGE P. A heretofore undescribed stony meteorite from Thomson, McDuffie County, Ga.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 4, No. 1881, Dec. 2, 1909, pp. 473-476, pls. 52, 53.

Describes briefly the mineral composition and structure of the stone and calls attention to an apparent case of secondary filling of a vein cavity by pyrite.

PEALE, ALBERT C. On the application of the term Laramie.

Amer. Journ. Sci., 4th ser., 28, July, 1909, pp. 45-58.

POGUE, JOSEPH E. Geology and structure of the ancient volcanic rocks of Davidson County, N. C.

Amer. Journ. Sci., 28, Sept., 1909, pp. 218-238, figs. 1-3.

The geology of a portion of the Piedmont Plateau of North Carolina, comprising the beveled folds of a great volcano-sedimentary series, is given. The following rock types are described: slate, acid fine tuff, acid coarse tuff, acid volcanic breccia, rhyolite (with chemical analysis), dacite (with chemical analysis), andesitic fine tuff, andesitic coarse tuff and breccia, andesite (with chemical analysis), gabbro, and diabase (with chemical analysis). The article concludes with a discussion of

POGUE, JOSEPH E.—Continued.

the structure and geologic history. It is based partly on material in the U. S. National Museum.

— Crystallographic notes on calcite.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 4, No. 1878, Sept. 24, 1909, pp. 465-468, pls. 53, 54.

Crystallographic descriptions of (1) two specimens calcite from Joplin, Mo., (2) calcite with moving bubble from Guanajuato, Mexico, and (3) small crystals of calcite from Virgilina, Va.

— On a remarkable cube of pyrite, carrying crystallized gold and galena of unusual habit.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 4, No. 1882, Dec. 22, 1909, pp. 477-484, pl. 59, figs. 81-85.

A description, with consideration of its crystallographic features, of a 2-inch cube of pyrite from Juneau, Alaska, the surface of which is studded with easily visible, clear-cut crystals of native gold and partly covered with plates of galena unusually laminated.

— On olivine-diabase from Davidson County, N. C.

Proc. U. S. Nat. Mus., 37, No. 1715, Jan. 19, 1910, pp. 475-484, pl. 37.

A petrographic description, including a discussion of the chemical composition, a classification according to the quantitative system, and the literature on olivine-diabase occurring in the United States.

— On sand-barites from Kharga, Egypt.

Proc. U. S. Nat. Mus., 38, No. 1726, Apr. 30, 1910, pp. 17-24, pl. 9, 1 fig.

An account of the crystallographic, microscopic, and chemical character of a large suite of crystals from the Libyan Desert of northeast Africa. Includes a review of the literature on sand barites and baritic sandstones.

STANTON, TIMOTHY W. The age and stratigraphic relations of the "Ceratops Beds" of Wyoming and Montana.

Proc. Washington Acad. Sci., 11, No. 3, Aug. 14, 1909, pp. 239-293.

Based partly on a study of specimens in the U. S. National Museum.

WHITE, DAVID. The effect of oxygen in coal.

Bull. U. S. Geol. Surv., No. 383, Washington, 1909, pp. 1-74, pls. 1-3.

PALEONTOLOGY.

ARNOLD, RALPH, and ROBERT ANDERSON. Geology and oil resources of the Coalinga District, California.

Bull. U. S. Geol. Surv., No. 398, 1910, pp. 1-354, pls. 1-52.

Illustrates the characteristic fossils of the district, the specimens used being Museum material.

BASSLER, R. S. Dendroid graptolites of the Niagara dolomites at Hamilton, Ontario | compiled by | Ray S. Bassler, | Curator, Division of Invertebrate Paleontology, | U. S. National Museum | (Seal) | Washington | Government Printing Office | 1909.

Bull. U. S. Nat. Mus., No. 65, July 10, 1909, pp. 1-ix, 1-76, pls. 1-5.

This bulletin, which is a compilation based partly upon manuscript left by the late Dr. R. R. Gurley, contains descriptions of the genera and species of graptolites from the Silurian dolomites at Hamilton, Ontario, with an introduction discussing the history of the manuscript, methods of photographing these organisms, and the geology of the region. Based partly upon material in the U. S. National Museum.

— Adequacy of the paleontologic record.

Pop. Sci. Mo., 76, No. 6, June, 1910, pp. 586-589.

This is one of a series of papers delivered before the Paleontologic Society, at the 1909 meeting at Boston in a conference upon the Paleontologic Record.

BERRY, EDWARD W. Pleistocene swamp deposits in Virginia.

Amer. Naturalist, 43, July, 1909, pp. 432-436.

— Contributions to the Mesozoic flora of the Atlantic coastal plain. iv. Maryland.

Bull. Torrey Bot. Club, 37, Jan., 1910, pp. 19-29, 1 pl.

— A new species of *Dewalquea* from the American Cretaceous.

Torrey, 10, No. 2, Feb., 1910, pp. 34-38, 1 fig.

BERRY, EDWARD W. A new Cretaceous *Bauhinia* from Alabama.

Amer. Journ. Sci., 4th ser., 29, Mar., 1910, pp. 256-258, 1 fig.

— Contributions to the Mesozoic flora of the Atlantic coastal plain. v. North Carolina.

Bull. Torrey Bot. Club, 37, Apr., 1910, pp. 181-200, pls. 19-24.

— Additions to the Pleistocene flora of Alabama.

Amer. Journ. Sci., 4th ser., 29, May, 1910, pp. 387-398, figs. 1-3.

— A revision of the fossil plants of the genus *Nageiopsis* of Fontaine.

Proc. U. S. Nat. Mus., 38, No. 1738, June 6, 1910, pp. 185-195, figs. 1, 2.

CLARKE, JOHN M. Early Devonian history of New York and eastern North America.

N. Y. State Mus., Mem. 9, Pt. 1, 1908, pp. 1-366, pls. 1-48; Pt. 2, 1909, pp. 1-250, pls. 1-34.

Many Museum specimens are used in the descriptions and illustrations.

DALL, WILLIAM HEALEY. Conditions governing the evolution and distribution of Tertiary faunas.

Journ. Geol. 17, Sept.-Oct., 1909, pp. 493-502.

A discussion based on the Tertiary collections of the U. S. National Museum.

— A new Floridian *Amnicola*.

Nautilus, 24, No. 1, May, 1910, p. 2.

Amnicola harperi is described as new from Lake Panasoffkee, Florida. The types are in the National Museum.

GILMORE, CHARLES W. A new rhynchocephalian reptile from the Jurassic of Wyoming, with notes on the fauna of "Quarry 9."

Proc. U. S. Nat. Mus., 37, No. 1698, Oct. 15, 1909, pp. 35-42, pl. 11, figs. 1-3.

Describes and figures the new genus and species, *Opisthias rarus*.

HAY, OLIVER P. On the nature of *Edestus* and related genera, with descriptions of one new genus and three new species.

Proc. U. S. Nat. Mus., 37, No. 1699, Oct. 16, 1909, pp. 43-61, pls. 12-15, figs. 1-7.

In this paper there are described three new species of *Edestus*, *E. crenulatus*, *E. serratus*, and *E. minusculus*. The last name is applied to a species found in Russia. A description, with figures, is given of the histology of *Edestus*. Additional specimens of *Lissopriion ferrieri* are described and figured, which show that the so-called teeth of this genus were coiled, as in *Helicopriion*. A new genus, *Toxopriion*, is founded, the type of which is Dean's *Edestus lecontei*. The genera here mentioned are all defined. The last section of the paper is devoted to a discussion of the nature of the objects on which the genera mentioned are based. Reasons are presented why they can hardly be regarded as teeth. It is believed by the writer that these objects, straight, bent, or coiled, were more probably organs of defense or attack, arranged along the back near the dorsal fins.

— On the manner of locomotion of the dinosaurs, especially *Diplodocus*, with remarks on the origin of the birds.

Proc. Washington Acad. Sci., 12, No. 1, Feb. 15, 1910, pp. 1-25, 1 pl., figs. 1-7.

The position taken by the author of this paper is that the sauripodous dinosaurs, especially *Diplodocus*, did not walk in a mammal-like way, as usually represented, but more as the crocodiles walk. In reply to Abel's argument that *Diplodocus* walked as usually represented because its feet were digitigrade, Hay points out that the land tortoise is digitigrade. Before the close of the Jurassic there were dinosaurs that went erect on their hind legs, but it is not necessary to suppose that their ancestors walked as mammals do. The origin of bipedalism is considered, illustrations thereof being drawn from certain lizards. Certain crocodiles attain great size, but this does not necessitate an erect gait. The entaxonic structure of the feet shows that *Diplodocus* did not walk erect but rather as crocodiles walk.

The author takes the position that the whole proximal end of the femur, rounded out by cartilage, formed the end of that bone and was inserted into the acetabulum, as in the crocodiles and the lizards. The thigh thus moved backward and forward in an approximately horizontal plane. Issue is taken with von Huene as regards the pose of some of the Triassic dinosaurs, the position of some of these

HAY, OLIVER P.—Continued.

being regarded as too mammal-like. The writer holds further that the bipedal dinosaurs had a more straddling gait than is usually supposed. It is held as not proved that the birdlike tracks found in the Connecticut Valley were not made by primitive dinosaur-like birds. The sauripods are regarded as the most primitive, and that from these sprang first the birds and later other groups of dinosaurs. The birds became bipedal because of specialization of their wings for flight; dinosaurs, because of the reduction of their fore limbs. Finally, bipedalism has no necessary connection with tridactylism.

Specimens in the collections of the U. S. National Museum were used for study in the preparation of this article.

— Descriptions of eight new species of fossil turtles from west of the hundredth meridian.

Proc. U. S. Nat. Mus., 38, No. 1747, June 29, 1910, pp. 307-526, pls. 10-12, figs. 1-23.

Two species of *Compsemys*, *C. vafer*, from Puerco or Torrejon deposits, in New Mexico, and *C. parva*, from the same region and probably the same deposits, are here described. These new materials throw new light on the characters of the genus. Mesoplastra were certainly present and the genus is to be placed in the Baenidae.

Two species of the remarkable genus *Basilemys* are described, *B. preclara*, from the Lance Creek beds of South Dakota, and *B. nobilis*, from beds of probably the same age in New Mexico.

Adocus vigoratus comes from the Cretaceous of New Mexico, the same beds which furnished *B. nobilis*. *Alamosemys annexa*, not distant from the preceding species, was found in what probably are Torrejon deposits in Colorado. *Hoplochelys bicarinata*, from the Puerco or Torrejon of New Mexico, is represented by large parts of both carapace and plastron. *Aspideretes amnigenus* is a new trionychid from the Lance Creek beds of South Dakota, and is represented by a nearly complete costal plate.

KNOWLTON, FRANK H. Descriptions of fossil plants from the Mesozoic and Cenozoic of North America. I. (1) Two fossil chain ferns (Woodwardia) from Oregon and Wyoming. (2) A new name for *Davallia tenuifolia* Swartz, as identified by Dawson, and *Asplenium tenerum* Lesquereux.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 4, No. 1884, Jan. 11, 1910, pp. 489-906, pls. 63, 64.

KNOWLTON, FRANK H. Biologic principles of paleo-geography.

Pop. Sci. Mo., June, 1910, pp. 601-603.

MOODIE, ROY L. Carboniferous air-breathing vertebrates of the United States National Museum.

Proc. U. S. Nat. Mus., 37, No. 1696, Sept. 23, 1909, pp. 11-28, pls. 4-10.

Describes and illustrates *Isodectes punctulatus* Cope, in addition to describing one

MOODIE, ROY L.—Continued.

new genus, *Odonterpeton*, and three new species, as follows: *Tuditanus walcotti*, *Odonterpeton triangularis*, *Erpetosaurus minutus*. Fifteen genera and sixteen species are listed, all based on specimens belonging to the U. S. National Museum.

WHITE, DAVID. The Upper Paleozoic floras, their succession and range.

Journ. Geol., 17, No. 4, May-June, 1909, pp. 320-341.